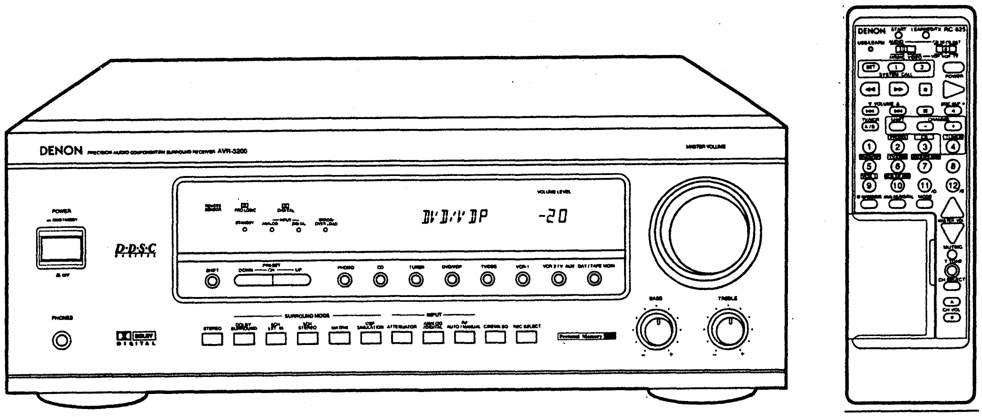
DENON

Hi-Fi AV Surround Receiver

SERVICE MANUAL

MODEL AVR-3200

AV SURROUND RECEIVER


DENON
AVR-3200
POWER
PHONES
D·D·S·C
DVD/VDP
-20
VOLUME LEVEL
MASTER VOLUME
BASS
TREBLE
SURROUND MODE
INPUT
RC-825

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- **Some illustration using in this service manual are slightly different from the actual set.**

NIPPON COLUMBIA CO., LTD.

- **SAFETY PRECAUTIONS**

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION

TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

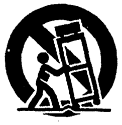
ATTENTION

POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

SAFETY INSTRUCTIONS

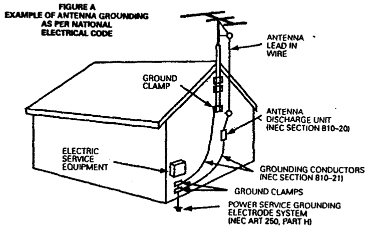
1. Read Instructions – All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions – All operating and use instructions should be followed.
5. Water and Moisture – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



7. Wall or Ceiling Mounting – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization – Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

FIGURE A
EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

NEC – NATIONAL ELECTRICAL CODE

12. Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
14. Cleaning – The appliance should be cleaned only as recommended by the manufacturer.
15. Power Lines – An outdoor antenna should be located away from power lines.
16. Outdoor Antenna Grounding – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.
17. Nonuse Periods – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
18. Object and Liquid Entry – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
19. Damage Requiring Service – The appliance should be serviced by qualified service personnel when:
    - A. The power-supply cord or the plug has been damaged; or
    - B. Objects have fallen, or liquid has been spilled into the appliance; or
    - C. The appliance has been exposed to rain; or
    - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    - E. The appliance has been dropped, or the enclosure damaged.
20. Servicing – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

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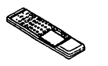
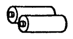
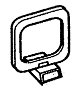
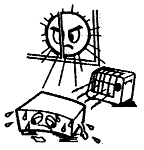
- **ACCESSORIES**

Check that the following parts are included in addition to the main unit:

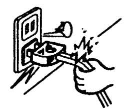
① Operating instructions 1
② Warranty (for North American model only) 1
③ Service station list 1
④ Remote control unit (RC-825) 1
⑤ R6P/AA batteries 2
⑥ AM loop antenna 1
⑦ FM indoor antenna 1
⑧ FM antenna adaptor 1

1 NOTE ON USE

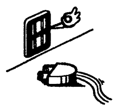


- Avoid high temperatures
  Allow for sufficient heat dispersion when installed on a rack.

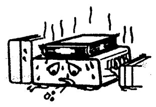


- Handle the power cord carefully.
  Hold the plug when unplugging the cord.

- Keep the set free from moisture, water, and dust.



- Unplug the power cord when not using the set for long periods of time.



*(For sets with ventilation holes)

- Do not obstruct the ventilation holes.

- Do not let foreign objects in the set.

- Do not let insecticides, benzene, and thinner come in contact with the set.

- Never disassemble or modify the set in any way.

2 BEFORE USING

Pay attention to the following before using this unit:

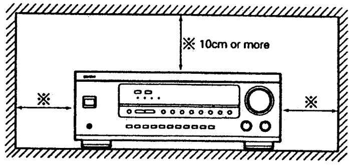
- **Moving the set**
  To prevent short circuits or damaged wires in the connection cords, always unplug the power cord and disconnect the connection cords between all other audio components when moving the set.
- **Before turning the power switch on**
  Check once again that all connections are proper and that there are not problems with the connection cords. Always set the power switch to the standby position before connecting and disconnecting connection cords.
- **Store this instructions in a safe place.**
  After reading, store this instructions along with the warranty in a safe place. Also fill in the items on the back page for your convenience.
- **Note that the illustrations in this instructions may differ from the actual set for explanation purposes.**

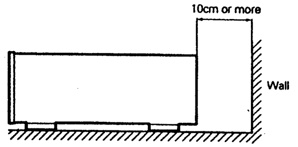
3 CAUTIONS ON INSTALLATION

Noise or disturbance of the picture may be generated if this unit or any other electronic equipment using microprocessors is used near a tuner or TV.
If this happens, take the following steps:

- Install this unit as far as possible from the tuner or TV.
- Set the antenna wires from the tuner or TV away from this unit's power cord and input/output connection cords.
- Noise or disturbance tends to occur particularly when using indoor antennas or 300 Ω/ohms feeder wires. **We recommend using outdoor antennas and 75 Ω/ohms coaxial cables.**

For heat dispersal, leave at least 10 cm of space between the top, back and sides of this unit and the wall or other components.





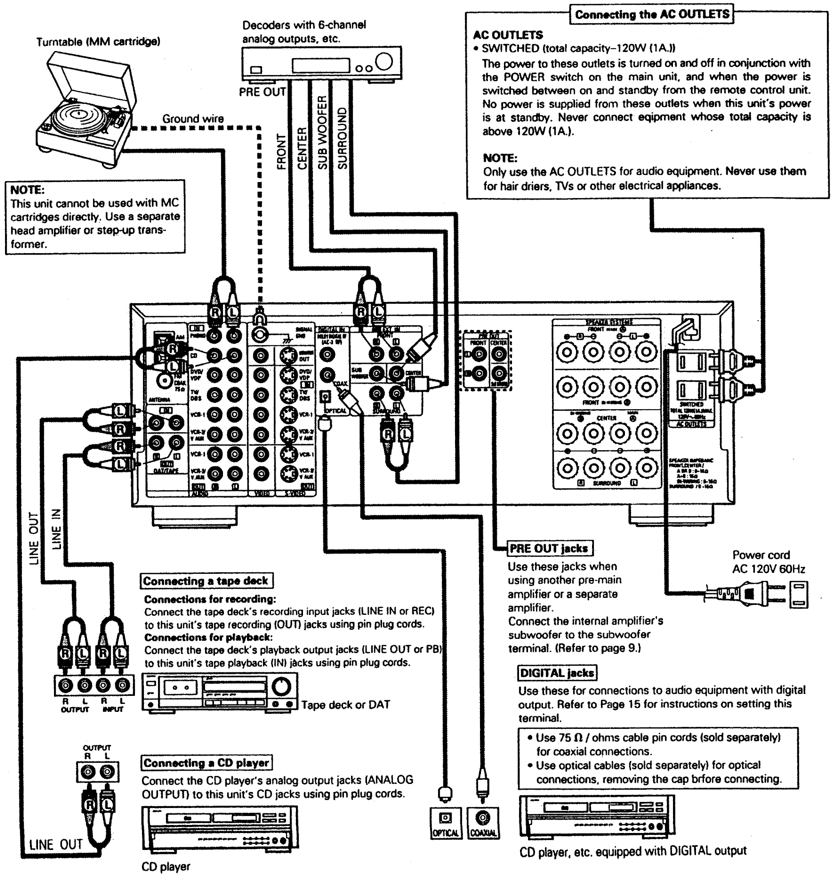
4 CAUTIONS ON HANDLING

- **Switching the input function when input jacks are not connected**
  A clicking noise may be produced if the input function is switched when nothing is connected to the input jacks. If this happens, either turn down the MASTER VOLUME control or connect components to the input jacks.
- **Muting of PRE OUT jacks**
  The PRE OUT jacks include a muting circuit. Because of this, the output signals are greatly reduced for several seconds after the power switch is turned on or input function, surround mode or any other set-up is changed. If the volume is turned up during this time, the output will be very high after the muting circuit stops functioning. Always wait until the muting circuit turns off before adjusting the volume.
- **Whenever the power switch is in the OFF state, the apparatus is still connected on some AC line voltages.**
  Please be sure to unplug the cord when you leave home for, say, a vacation.

5 CONNECTIONS

- Do not plug in the power cord until all connections have been completed.
- Be sure to connect the left and right channels properly (left with left, right with right).
- Insert the plugs securely. Incomplete connections will result in the generation of noise.
- **Use the AC OUTLETS for audio equipment only. Do not use them for hair driers, etc.**
- Note that binding pin plug cords together with power cords or placing them near a power transformer will result in generating hum or other noise.
- Noise or humming may be generated if a connected audio equipment is used independently without turning the power of this unit on. If this happens, turn on the power of the this unit.

Connecting the audio components



NOTE:
This unit cannot be used with MC cartridges directly. Use a separate head amplifier or step-up transformer.

Connecting the AC OUTLETS

AC OUTLETS
- SWITCHED (total capacity–120W (1A.))

The power to these outlets is turned on and off in conjunction with the POWER switch on the main unit, and when the power is switched between on and standby from the remote control unit. No power is supplied from these outlets when this unit's power is at standby. Never connect eqipment whose total capacity is above 120W (1A.).

NOTE:
Only use the AC OUTLETS for audio equipment. Never use them for hair driers, TVs or other electrical appliances.

Connecting a tape deck

Connections for recording:
Connect the tape deck's recording input jacks (LINE IN or REC) to this unit's tape recording (OUT) jacks using pin plug cords.
Connections for playback:
Connect the tape deck's playback output jacks (LINE OUT or PB) to this unit's tape playback (IN) jacks using pin plug cords.

Connecting a CD player

Connect the CD player's analog output jacks (ANALOG OUTPUT) to this unit's CD jacks using pin plug cords.

PRE OUT jacks

Use these jacks when using another pre-main amplifier or a separate amplifier.
Connect the internal amplifier's subwoofer to the subwoofer terminal. (Refer to page 9.)

DIGITAL jacks

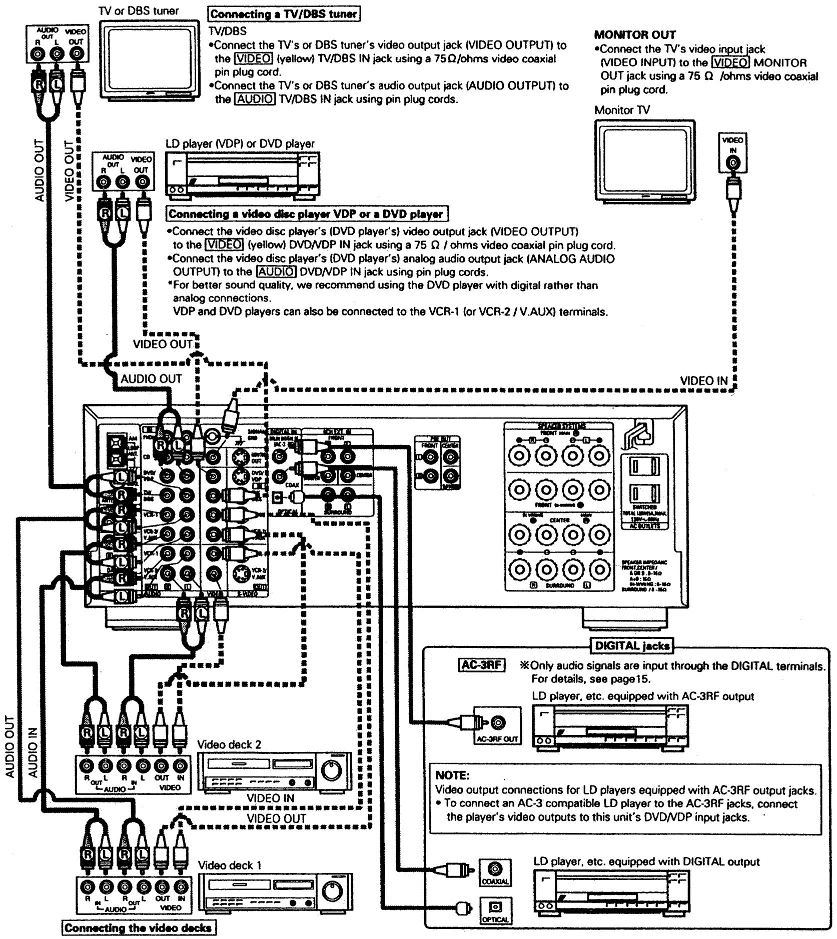
Use these for connections to audio equipment with digital output. Refer to Page 15 for instructions on setting this terminal.

- Use 75 Ω / ohms cable pin cords (sold separately) for coaxial connections.
- Use optical cables (sold separately) for optical connections, removing the cap brfore connecting.

CD player, etc. equipped with DIGITAL output

Connecting the video equipments

To connect the video signal, connect using a 75 Ω/ohms video signal cable cord. Using an improper cable can result in a drop in sound quality.



Connecting a TV/DBS tuner

TV/DBS
- Connect the TV's or DBS tuner's video output jack (VIDEO OUTPUT) to the VIDEO (yellow) TV/DBS IN jack using a 75Ω/ohms video coaxial pin plug cord.
- Connect the TV's or DBS tuner's audio output jack (AUDIO OUTPUT) to the AUDIO TV/DBS IN jack using pin plug cords.

MONITOR OUT
- Connect the TV's video input jack (VIDEO INPUT) to the VIDEO MONITOR OUT jack using a 75 Ω /ohms video coaxial pin plug cord.

Connecting a video disc player VDP or a DVD player

- Connect the video disc player's (DVD player's) video output jack (VIDEO OUTPUT) to the VIDEO (yellow) DVD/VDP IN jack using a 75 Ω / ohms video coaxial pin plug cord.
- Connect the video disc player's (DVD player's) analog audio output jack (ANALOG AUDIO OUTPUT) to the AUDIO DVD/VDP IN jack using pin plug cords.

*For better sound quality, we recommend using the DVD player with digital rather than analog connections.
VDP and DVD players can also be connected to the VCR-1 (or VCR-2 / V.AUX) terminals.

DIGITAL jacks

AC-3RF ※Only audio signals are input through the DIGITAL terminals. For details, see page15.
LD player, etc. equipped with AC-3RF output

NOTE:
Video output connections for LD players equipped with AC-3RF output jacks.
- To connect an AC-3 compatible LD player to the AC-3RF jacks, connect the player's video outputs to this unit's DVD/VDP input jacks.

LD player, etc. equipped with DIGITAL output

Connecting the video decks

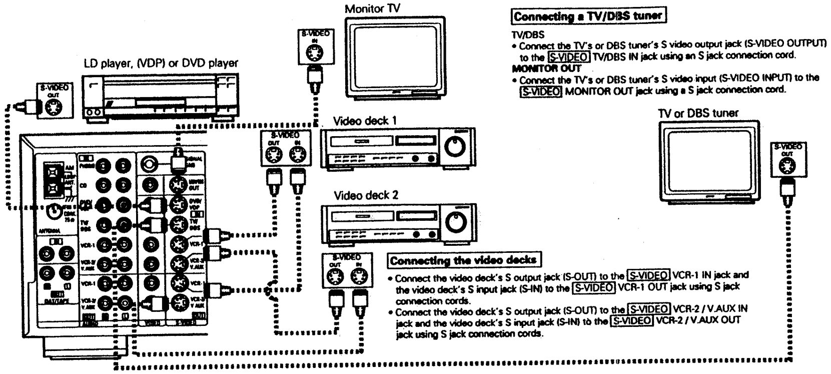
- There are two sets of video deck (VCR) jacks, so two video decks can be connected for simultaneous recording or video copying.

Video input / output connections:
- Connect the video deck's video output jack (VIDEO OUT) to the VIDEO (yellow) VCR-1 IN jack, and the video deck's video input jack (VIDEO IN) to the VIDEO (yellow) VCR-1 OUT jack using 75 Ω /ohms video coaxial pin plug cords.

Connecting the audio output jacks
- Connect the video deck's audio output jacks (AUDIO OUT) to the AUDIO VCR-1 IN jacks, and the video deck's audio input jacks (AUDIO IN) to the AUDIO VCR-1 OUT jacks using pin plug cords.

※Connect the second video deck to the VCR-2 jacks in the same way.

Connecting the S-video terminals


LD player, (VDP) or DVD player
S-VIDEO OUT
Monitor TV
S-VIDEO IN
Video deck 1
S-VIDEO OUT IN
Video deck 2
S-VIDEO OUT IN
TV or DBS tuner
S-VIDEO OUT

Connecting a TV/DBS tuner

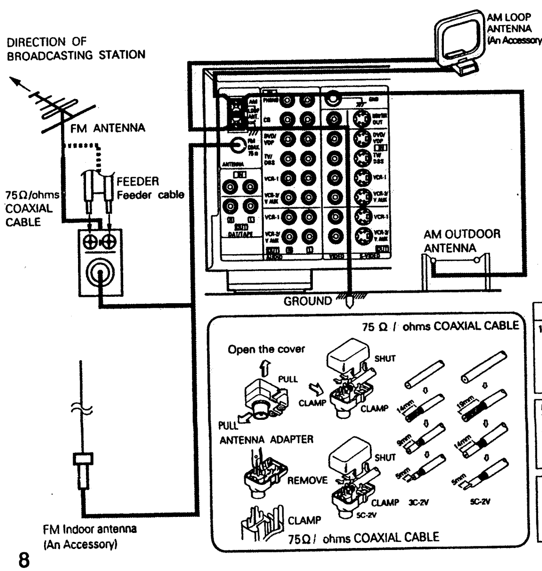
TV/DBS
- Connect the TV's or DBS tuner's S video output jack (S-VIDEO OUTPUT) to the S-VIDEO TV/DBS IN jack using an S jack connection cord.

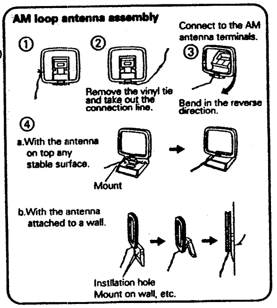
MONITOR OUT
- Connect the TV's or DBS tuner's S video input (S-VIDEO INPUT) to the S-VIDEO MONITOR OUT jack using a S jack connection cord.

Connecting the video decks
- Connect the video deck's S output jack (S-OUT) to the S-VIDEO VCR-1 IN jack and the video deck's S input jack (S-IN) to the S-VIDEO VCR-1 OUT jack using S jack connection cords.
- Connect the video deck's S output jack (S-OUT) to the S-VIDEO VCR-2 / V.AUX IN jack and the video deck's S input jack (S-IN) to the S-VIDEO VCR-2 / V.AUX OUT jack using S jack connection cords.

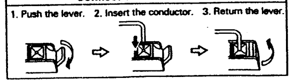
- **A note on the S input jacks**
  The input selectors for the S inputs and pin jack inputs work in conjunction with each other.
- **Precaution when using S-jacks**
  This unit's S-jacks (input and output) and video pin jacks (input and output) have independent circuit structures, so that video signals input from the S-jacks are only output from the S-jack outputs and video signals input from the pin jacks are only output from the pin jack outputs. When connecting this unit with equipment that is equipped with S-jacks, keep the above point in mind and make connections according to the equipment's instruction manuals.

Connecting the antenna terminals


DIRECTION OF BROADCASTING STATION
FM ANTENNA
75Ω/ohms COAXIAL CABLE
FEEDER
Feeder cable
AM LOOP ANTENNA (An Accessory)
AM OUTDOOR ANTENNA
GROUND
FM Indoor antenna (An Accessory)
75 Ω / ohms COAXIAL CABLE
Open the cover
PULL
SHUT
CLAMP
ANTENNA ADAPTER
REMOVE
3C-2V
5C-2V
75Ω / ohms COAXIAL CABLE


AM loop antenna assembly
①
②
Remove the vinyl tie and take out the connection line.
Connect to the AM antenna terminals.
③
Bend in the reverse direction.
④
a.With the antenna on top any stable surface.
Mount
b.With the antenna attached to a wall.
Instllation hole
Mount on wall, etc.

Connection of AM antennas


1. Push the lever.
2. Insert the conductor.
3. Return the lever.

Note to CATV system installer :
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding sysyem of the building, as close to the point of cable entry as practical.

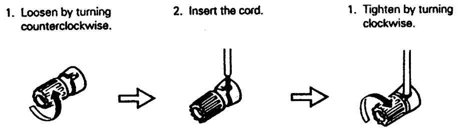
Notes :
- Do not connect two FM antennas simultaneously.
- Even if an external AM antenna is used, do not disconnect the AM loop antenna.
- Make sure AM loop antenna lead terminals do not touch metal parts of the panel.

Speaker system connections

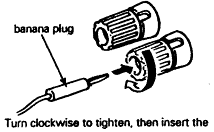
- Connect the speaker terminals with the speakers making sure that like polarities are matched (⊕ with ⊕ , ⊖ with ⊖). Mismatching of polarities will result in weak central sound, unclear orientation of the various instruments, and the sense of direction of the stereo being impaired.
- When making connections, take care that none of the individual conductors of the speaker cord come in contact with adjacent terminals, with other speaker cord conductors, or with the rear panel. Use banana plugs the speaker cords touch or if their core wire is thick and it is difficult to connect the cord to the speaker terminal.

Speaker Impedance
- When speaker systems A and B are use separately, speakers with an impedance of from 8 to 16 Ω/ohms can be connected for use as front and center speakers.
- Be careful when using two pairs of front or center speakers (A + B) at the same time, since use of speakers with an impedance of less than 16 Ω/ohms will lead to damage.
- Speakers with an impedance of 8 to 16 Ω/ohms can be connected for use as surround speakers.
- The protection circuit may operate or damage may occur when speakers with an impedance outside of the above range are used.

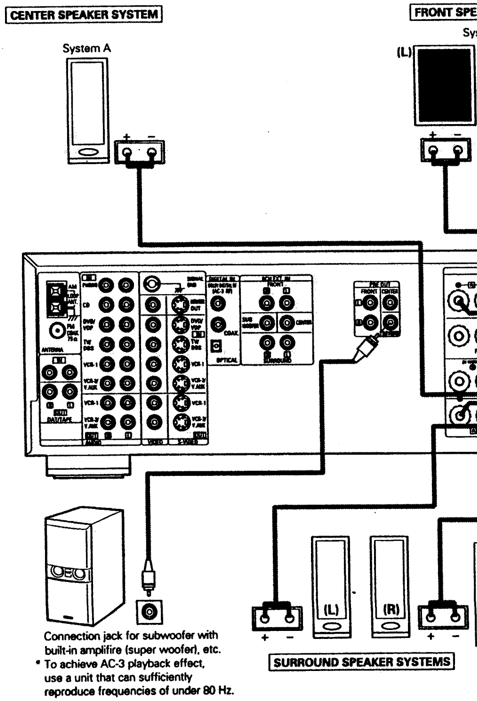
Connecting the speaker terminals


1. Loosen by turning counterclockwise.
2. Insert the cord.
1. Tighten by turning clockwise.

Connecting banana plugs


banana plug

Turn clockwise to tighten, then insert the banana plug.

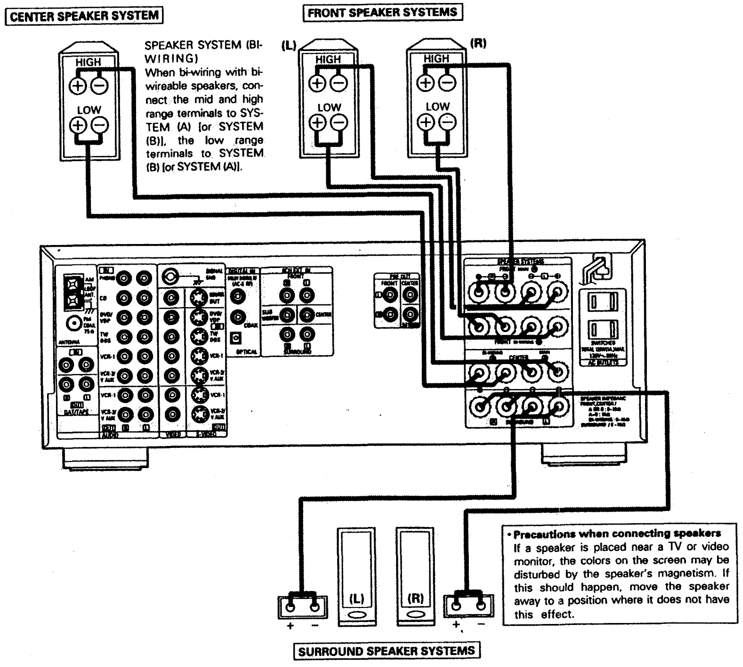

CENTER SPEAKER SYSTEM
System A
FRONT SPEAKER SYSTEMS
System A
(L)
(R)
+ -
SURROUND SPEAKER SYSTEMS
(L)
(R)

Connection jack for subwoofer with built-in amplifire (super woofer), etc.
- To achieve AC-3 playback effect, use a unit that can sufficiently reproduce frequencies of under 80 Hz.

- **Precautions when connecting speakers**
  If a speaker is placed near a TV or video monitor, the colors on the screen may be disturbed by the speaker's magnetism. If this should happen, move the speaker away to a position where it does not have this effect.

- About bi-wiring
  If your speakers have bi-wiring terminals, you can achieve higher quality sound by adding cords and using bi-wiring, as shown on the diagram below.
- By connecting speaker systems to both the speaker A and B terminals, you can play the same music source simultaneously in different rooms. (Use speakers with impedances of 16 Ω/ohms.)

Bi-wiring procedure



SPEAKER SYSTEM (BI-WIRING)
When bi-wiring with bi-wireable speakers, connect the mid and high range terminals to SYSTEM (A) [or SYSTEM (B)], the low range terminals to SYSTEM (B) [or SYSTEM (A)].

• Precautions when connecting speakers
If a speaker is placed near a TV or video monitor, the colors on the screen may be disturbed by the speaker's magnetism. If this should happen, move the speaker away to a position where it does not have this effect.

Protector circuit

This set has a built-in high speed protector circuit which protects the internal circuitry from strong currents that may be generated if the speakers are used with their cords insecurely connected to the speaker terminals or if the cords are short-circuited.
If this protector circuit is activated, the speaker output is automatically cut off, the display turns off and the STANDBY LED flashes rapidly.
If this should happen, be sure to turn off the set's power, then check the speaker cord connections once again before turning the power back on. The sound will be muted for several seconds, after which the set will operate normally.

6 SYSTEM SETUP

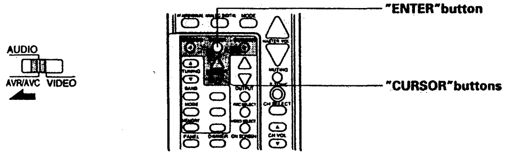
After connections with other components have been made, make the various settings on the monitor connected to the MONITOR OUT terminal using this unit's on screen display function. These settings must be made in order to complete the AV system in your listening room.
Make the seven settings described below.

Caution:
Do not play any apparatus connected to this set while in setting item ① or ② below, or some malfunction may occur.

① **Speaker Configuration**
② **Delay Time**
③ **Channel Level**
④ **Digital Input**
(only when an AV component is connected to the digital input jacks)
⑤ **DOLBY DIGITAL**
⑥ **Auto Tuner Preset**
⑦ **On Screen Display**

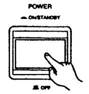
NOTES:
- The output from the S MONITOR OUT terminal has priority for the on screen display. For example, the S–video signals have priority if signals are input from a component on which both the S–video and regular video input terminals are connected and the output monitor is connected to both the S–video and regular video output terminals. If you want to always output the on screen display signals to the video output, do not connect a cable to the S MONITOR OUT terminal.
- This model's on screen display function is designed for high resolution monitor displays.
  Small characters may be difficult to read on small displays or low resolution TVs.

Use the following buttons on the remote control unit to make the settings:
✻ Set to the AVR/AVC side.



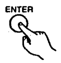
Before setting up the system

1



Press the POWER switch on the main unit or the POWER button on the remote control unit to turn on the power.

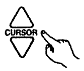
2



Press the ENTER button.
- The "Tuner Preset Stations" menu is only displayed when the input function is set to "TUNER".
- The "Surround Parameters" are not displayed when the parameters that should be set in the selected surround mode are not there. Examples include "5 CH STEREO", "6 CH EXT. IN", and "STEREO" (with PCM analog input) modes.

```
Menu
☞System Setup
 Surround Parameters
 Tuner Preset Stations
 Menu Off
```

3



Use the CURSOR △ and ▽ buttons to set the ☞ mark to "System Setup".

```
Menu
☞System Setup
```

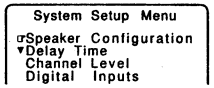
4

Press the ENTER button to switch the screen.

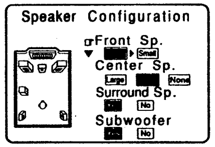
```
System Setup Menu
☞Speaker Configuration
 Delay Time
 Channel Level
 Digital Inputs
 DOLBY DIGITAL
 Auto Tuner Presets
 On Screen Display
 Setup Menu Off
```

Setting the speaker configuration

1 Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Speaker Configuration".

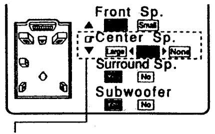

System Setup Menu
☞Speaker Configuration
▼Delay Time
Channel Level
Digital Inputs

2 Press the ENTER button to switch the screen.


Speaker Configuration
☞Front Sp.
▼ ▶ Small
Center Sp.
Large None
Surround Sp.
No
Subwoofer
No

3 Use the CURSOR △ and ▽ buttons to set the ☞ mark to the speaker to be set.

4 Use the CURSOR ◀ and ▶ buttons to highlight the parameter to be set.


Front Sp.
▲ Small
☞Center Sp.
▼ Large ◀ ▶ None
Surround Sp.
No
Subwoofer
No

Example:Center speaker selected and parameter set to "Small".

■ **Parameters**

Large	Select this when using speakers that can fully reproduce low sounds of below 80 Hz.
Small	Select this when using speakers that cannot reproduce low sounds of below 80 Hz with sufficient volume. When this setting is selected, low frequencies of below 80 Hz are assigned to the subwoofer.
None	Select this when no speakers are installed.
Yes/No	Select "Yes" when surround speakers and a subwoofer are installed, "No" when they are not installed.

NOTE: ＊ Select "Large" or "Small" not according to the physical size of the speaker, but according to the bass reproduction capacity at 80 Hz. If you cannot determine the best setting, try comparing the sound when set to "Small" and when set to "Large", at a level that will not damage the speakers.

＊ When "None" has been selected for the center speaker, "No" cannot be selected for the surround speakers. Also note that when "No" has been selected for the surround speakers, "None" cannot be selected for the center speaker.

5 Press the ENTER button to enter the setting.
The "System Setup Menu" screen reappears.

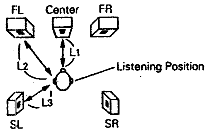
Caution:
In case the subwoofer is not used, be sure to set "Subwoofer = No", or the bass sound of front channel is divided to subwoofer channel and not reproduced in some mode.

Setting the delay time

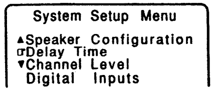
Input the distances from the listening position to the speakers and set the surround delay time.

Preparations:
Measure the distances from the listening position to the speakers (L1 to L3 on the diagram at the right).

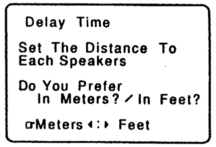
L_1: Distance from center speaker to listening position
L_2: Distance from front speakers to listening position
L_3: Distance from rear speakers to listening position


FL
Center
FR
L1
L2
L3
Listening Position
SL
SR

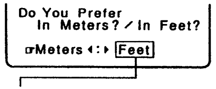
1 Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Delay Time".


System Setup Menu
▲Speaker Configuration
☞Delay Time
▼Channel Level
Digital Inputs

2 Press the ENTER button to switch the screen.

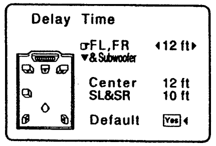

Delay Time
Set The Distance To Each Speakers
Do You Prefer In Meters? / In Feet?
☞Meters ◀ : ▶ Feet

3 Use the CURSOR ◀ and ▶ buttons to select the unit of distance. Highlight the desired unit, "Meters" or "Feet".


Do You Prefer In Meters? / In Feet?
☞Meters ◀ : ▶ Feet

Example:"Feet" selected.

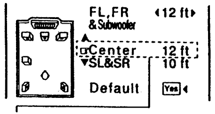
4 • Selecting "Meters" or "Feet" in Step 3 will automatically change the screen to the one on the right.


Delay Time
☞FL,FR ◀12 ft▶
▼& Subwoofer
Center 12 ft
SL&SR 10 ft
Default Yes ◀

5 Use the CURSOR △ and ▽ buttons to set the ☞ mark to speaker to be set.

6 Use the CURSOR ◀ and ▶ buttons to set the distance from the speaker to the listening position.

- The number changes in units of 1 foot (or 0.1 meters) each time one of the buttons is pressed. Select the value closest to the measured distance.


FL,FR ◀12 ft▶
& Subwoofer
▲
☞Center 12 ft
▼SL&SR 10 ft
Default Yes ◀

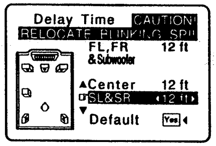
Example:Distance from center speaker to listening position set to 12ft.

＊ The settings are reset to the factory settings when the ☞ mark is set to "Default" and "Yes". (Refer to page 18.)

＊ If you set an invalid distance, a CAUTION notice, such as screen appear as shown right. In this case, please relocate the blinking speaker(s) so that its distance is no larger than the value shown in highlighted line. Then press the ENTER button again.

＊ Set in such a way that the distance to the center speaker is the same as or up to 5 feet (1.5 meters) shorter than the distance to the front left and front right speakers and the subwoofer.

＊ Set in such a way that the distance to the surround left and right speakers is the same as or up to 15 feet (4.5 meters) shorter than the distance to the front left and front right speakers and the subwoofer.


Delay Time CAUTION!
RELOCATE BLINKING SP!!
FL,FR 12 ft
& Subwoofer
▲Center 12 ft
☞SL&SR ◀12 ft▶
▼
Default Yes ◀

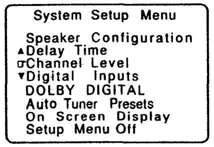
7 Press the ENTER button to enter the setting.
The "System Setup Menu" screen reappears.
This procedure automatically sets the optimum surround delay time for the listening room.

NOTE:
If the unit of distance is changed after the delay time is set, the setting is cleared and reset to the factory setting. (Refer to page 18.)

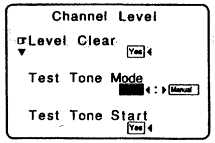
Setting the channel level

Use the following procedure to adjust the balance of the playing level between the different channels.
This sets the balance of the playing levels between the different channels to the same balance for all the surround modes.
Make the adjustment from the listening position while listening to the test tone output from each speaker.

1 Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Channel Level".

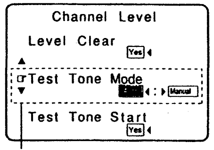

System Setup Menu
Speaker Configuration
▲Delay Time
☞Channel Level
▼Digital Inputs
DOLBY DIGITAL
Auto Tuner Presets
On Screen Display
Setup Menu Off

2 Press the ENTER button to switch the screen.


Channel Level
☞Level Clear
Yes
Test Tone Mode
Manual
Test Tone Start
Yes

3 Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Test Tone Mode".

4 Use the CURSOR ◀ and ▶ buttons to select the mode.
Highlight "Auto" or "Manual" to select that mode.

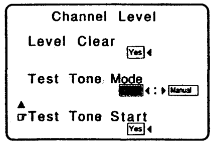

Channel Level
Level Clear
Yes
☞Test Tone Mode
Manual
Test Tone Start
Yes

Example:"Auto" mode selected.

Auto: Adjust the level while listening to the test tones output automatically from the different speakers.
Manual: Select the speaker from which to output the test tone to adjust the level.

5 Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Test Tone Start".

6 Press the CURSOR ◀ button and is set to "Yes".

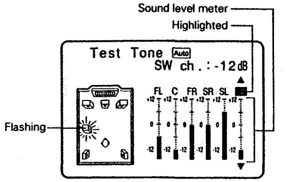

Channel Level
Level Clear
Yes
Test Tone Mode
Manual
☞Test Tone Start
Yes

7 **A. If the "Auto" mode is selected:**

Test tones are automatically emitted from the different speakers.
The test tones are emitted from the different speakers in the following order, at 4–second intervals the first time and second time around, 2–second intervals the third time around and on:

FL → C → FR → SR → SL → SW

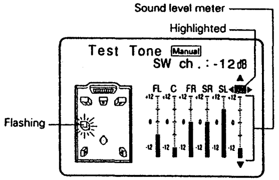
Use the CURSOR △ and ▽ buttons to adjust so that the volume of the test tones output from the different speakers sounds the same.
The volume can be adjusted in units of 1 dB from −12 to +12 dB.


Sound level meter
Highlighted
Flashing
Test Tone Auto
SW ch. : -12dB
FL
C
FR
SR
SL
+12
0
-12

Example:Volume set to -12 dB with test tone being output from subwoofer.

B. If the "Manual" mode is selected:

Use the CURSOR ◀ and ▶ buttons to highlight and select the speaker from which you want to output test tones, then use the CURSOR △ and ▽ buttons to adjust so that the volume of the test tones output from the different speakers sounds the same.


Sound level meter
Highlighted
Flashing
Test Tone Manual
SW ch. : -12dB
FL
C
FR
SR
SL
+12
0
-12

Example:Subwoofer selected and volume set to -12 dB.

The level of each channel should be adjusted to 75 dB (C–weighted, slow meter mode) on a sound level meter at the listening position.
If a sound level meter is not available adjust the channels by ear so the sound levels are the same. Because adjusting the subwoofer level test tone by ear is difficult, use a well known music selection and adjust for natural balance.
NOTE: When adjusting the level of an active subwoofer system, you may also need to adjust the subwoofer's own volume control.

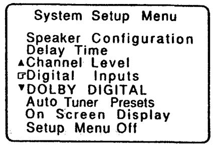
8 Press the ENTER button to enter the setting.
The "Channel Level" screen reappears.
To cancel the settings, select "Level Clear" and "Yes" on the "Channel Level" screen, then make the settings again.

NOTE:
When the level clear operation is performed, all channel levels for all modes are set to 0 dB.

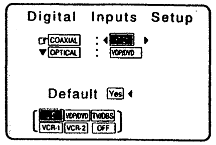
Digital input setup

Input the types of components connected to the digital input terminals.

1 Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Digital Inputs".

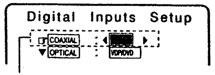

System Setup Menu
Speaker Configuration
Delay Time
▲Channel Level
☞Digital Inputs
▼DOLBY DIGITAL
Auto Tuner Presets
On Screen Display
Setup Menu Off

2 Press the ENTER button to switch the screen.


Digital Inputs Setup
☞COAXIAL
▼OPTICAL
VDP/DVD
Default
Yes
VDP/DVD
TV/DBS
VCR-1
VCR-2
OFF

3 Use the CURSOR △ and ▽ buttons to set the ☞ mark to the connector whose input you want to set (COAXIAL or OPTICAL).

4 Use the CURSOR ◀ and ▶ buttons to highlight and select the type of device connected to the various terminals.
- Select "OFF" if nothing is connected.


Digital Inputs Setup
☞COAXIAL
▼OPTICAL
VDP/DVD

Example:COAXIAL connector selected and input device set to CD.

∗ The settings are reset to the factory settings when the ☞ mark is set to "Default" and "Yes". (Refer to page 18.)
NOTE: PHONO, TUNER and DAT/TAPE cannot be selected.

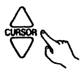
5 Press the ENTER button to enter the setting.
The "System Setup Menu" screen reappears.

DOLBY DIGITAL

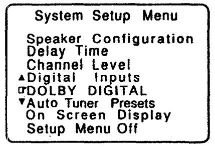
Use the following procedure to set the level of the LFE (Low Frequency Effect) included in the source when playing program sources recorded in Dolby Digital.

- If the subwoofer clips due to the LFE signal during Dolby Digital playback, adjust the level as needed.

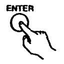
1



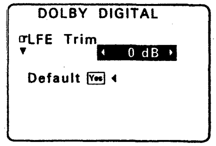
Use the CURSOR △ and ▽ buttons to set the ☞ mark to "DOLBY DIGITAL".


System Setup Menu
Speaker Configuration
Delay Time
Channel Level
▲Digital Inputs
☞DOLBY DIGITAL
▼Auto Tuner Presets
On Screen Display
Setup Menu Off

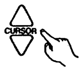
2



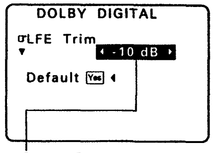
Press the ENTER button to switch the screen.


DOLBY DIGITAL
☞LFE Trim ◂ 0 dB ▸
Default Yes ◂

3

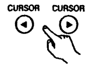


Use the CURSOR △ and ▽ buttons to set the ☞ mark to "LFE Trim".


DOLBY DIGITAL
☞LFE Trim ◂ -10 dB ▸
Default Yes ◂

Example:LFE level set to -10 dB

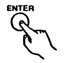
4



Use the CURSOR ◀ and ▶ buttons to set the LFE level.
The level can be adjusted in units of 1 dB from –10 to 0 dB. Set to the desired level according to the speaker systems being used and the source to be played.

* The settings are reset to the factory settings when the ☞ mark is set to "Default" and "Yes". (Refer to page 18.)

5



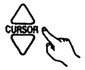
Press the ENTER button to enter the setting.
The "System Setup Menu" screen reappears.

Auto tuner presets

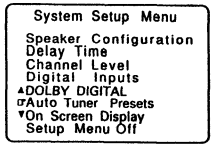
Use this to automatically search for FM broadcasts and store up to 40 stations at preset channels A1 to 8, B1 to 8, C1 to 8, D1 to 8 and E1 to 8.

NOTE:
If an FM station cannot be preset automatically due to poor reception, use the "Manual tuning" operation to tune in the station, then preset it using the manual "Preset memory" operation. (Refer to page 36.)

1

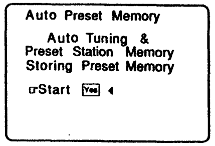


Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Auto Tuner Presets".

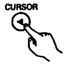

System Setup Menu
Speaker Configuration
Delay Time
Channel Level
Digital Inputs
▲DOLBY DIGITAL
☞Auto Tuner Presets
▼On Screen Display
Setup Menu Off

2

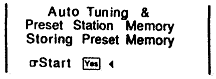
Press the ENTER button to switch the screen.


Auto Preset Memory
Auto Tuning &
Preset Station Memory
Storing Preset Memory
☞Start Yes ◂

3



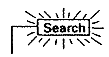
Press the CURSOR ◀ button.


Auto Tuning &
Preset Station Memory
Storing Preset Memory
☞Start Yes ◂

4

The set automatically starts searching for FM stations.

- "Search" flashes on the screen.
- "Completed" a appears once searching is completed.



Flashing: When searching is competed, the display switches to "Completed".

5

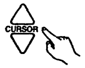
When searching is completed, the screen automatically returns to the "System Setup Menu".

* For instructions on checking the frequencies of the preset stations, refer to page 27.

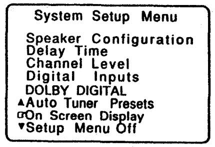
On Screen Display

This set is equipped with an on-screen display function that displays information on the various operations on the monitor TV connected to the VIDEO MONITOR OUT connector on the rear panel. These messages are superimposed on the picture when a video source is being played and displayed on a blue background when no video source is being played.
Use the following procedure to turn this function on and off.

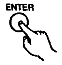
1



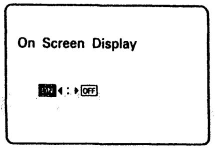
Use the CURSOR △ and ▽ buttons to set the ☞ mark to "On Screen Display".


System Setup Menu
Speaker Configuration
Delay Time
Channel Level
Digital Inputs
DOLBY DIGITAL
▲Auto Tuner Presets
☞On Screen Display
▼Setup Menu Off

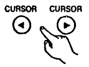
2



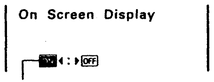
Press the ENTER button to switch the screen.


On Screen Display
ON ◂ : ▸ OFF

3



Use the CURSOR ◀ and ▶ buttons to select "ON" or "OFF". Highlight the desired setting.



Example:On-screen display function set to "ON".

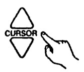
4

Press the ENTER button to enter the setting.

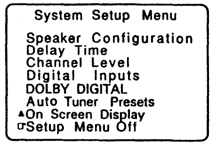
This completes the system setup operations. Once the system is set up, there is no need to make the settings again unless other components or speakers are connected or the speaker layout is changed.

Operation after completing system setup

1



Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Setup Menu Off".



```
System Setup Menu

Speaker Configuration
Delay Time
Channel Level
Digital Inputs
DOLBY DIGITAL
Auto Tuner Presets
▲On Screen Display
☞Setup Menu Off
```

2

Press the enter button twice to turn off the on screen display.

■ SYSTEM SETUP DEFAULT VALUE

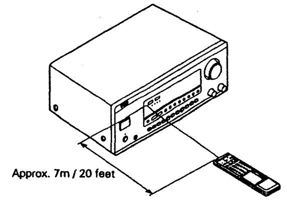
① SPEAKER CONFIGURATION	Front Sp.		Center Sp.	Surround Sp.		Subwoofer
	Small		Small	Yes		Yes
② DELAY TIME	FL, FR & Subwoofer		Center	SL & SR		
	12 ft. (3.6 m)		12 ft. (3.6 m)	10 ft. (3.0 m)		
③ CHANNEL LEVEL	FL	FR	C	SL	SR	SW
	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB
④ DIGITAL INPUTS	COAXIAL: CD			OPTICAL: DVD/VDP		
⑤ DOLBY DIGITAL	LFE Trim 0 dB					
⑥ AUTO TUNER PRESETS						
A1～A8	87.5/89.1/98.1/107.9/90.1/90.1/90.1/90.1 MHz					
B1～B8	520/600/1000/1400/1500/1710 kHz/90.1/90.1 MHz					
C1～C8	90.1 MHz					
D1～D8	90.1 MHz					
E1～E8	90.1 MHz					
⑦ ON SCREEN DISPLY	ON					

Playback with the above setting is possible upon shipment from the factory and after initializing (refer to page 37).

7 REMOTE CONTROL UNIT

Following the procedure outlined below, insert the batteries before using the remote control unit.

Range of operation of the remote control unit



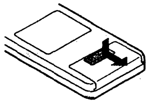
Point the remote control unit at the remote control sensor as shown on the diagram at the left.

NOTES:

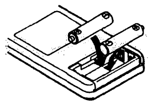
- The remote control unit can be used from a straight distance of approximately 7 meters/20 feet, but this distance will shorten or operation will become difficult if there are obstacles between the remote control unit and the remote control sensor, if the remote control sensor is exposed to direct sunlight or other strong light, or if operated from an angle.
- Neon signs or other devices emitting pulse–type noise nearby may result in malfunction, so keep the set as far away from such devices as possible.

Inserting the batteries

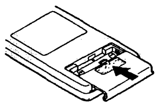
① Press as shown by the arrow and slide off.



② Insert the SUM3 batteries properly, as shown on the diagram.



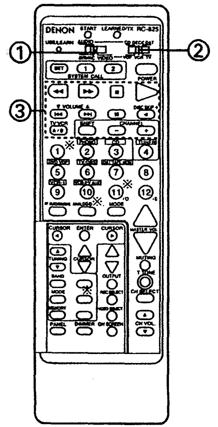
③ Close the lid.



NOTES:

- Use only AA, R6P, UM–3 batteries for replacement.
- Be sure the polarities are correct. (See the illustration inside the battery compartment.)
- Remove the batteries if the remote control transmitter will not be used for an extended period of time.
- If batteries leak, dispose of them immediately. Avoid touching the leaked material or letting it come in contact with clothing, etc. Clean the battery compartment thoroughly before installing new batteries.
- Have replacement batteries on hand so that the old batteries can be replaced as quickly as possible when the time comes.
- The codes that have been learned may be lost if removed batteries are not replaced within about 5 minutes.

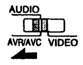
System code buttons



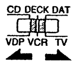
※ These buttons does not function. (Some buttons can be used by using the pre-set memory or the learning function.)

DENON remote–controllable audio components can be controlled using this unit's remote control unit. Note that some components, however, cannot be operated with this remote control unit.

1 Set to slide switch to "AUDIO" ("AVR/AVC").

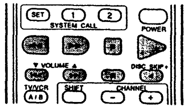


2 Set the slide switch to the position for the component to be operated (CD, DECK or DAT).



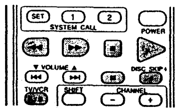
3 Use the buttons shown below to operate the audio component. For details, refer to the respective component's manual.

a. For CD players and DATs



◀◀, ▶▶ : Manual search (reverse and forward)
■ : Stop
▶ : Play
I◀◀, ▶▶I : Auto search
II : Pause
DISC : Disc selection
SKIP+ : (CD changer only)

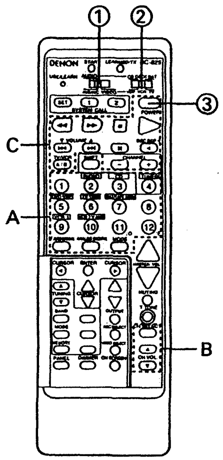
b. For tape decks (DECK)



◀◀ : Reverse
▶▶ : Forward
■ : Stop
▶ : Forward play
II : Pause
A/B : A/B deck selection
◀ : Reverse play

Preset memory

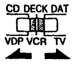
DENON and other makes of components can be operated by setting the preset memory for your make of video component. **Operation is not possible for some models, however. In this case use the learning function (see page 22) to store the remote control signals.**
For instructions on clearing the presettings stored in the preset memory, see page 23.



1 Set the slide switch to "VIDEO".

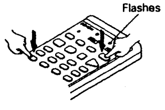
AUDIO
AVR/AVC VIDEO

2 Set the slide switch to the component to be registered (VDP, VCR or TV).



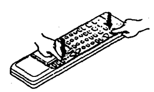
(Keep the POWER button pressed in when performing steps 3 and 4.)

3 Holding in the POWER button, press the button for the corresponding manufacturer in block A.
(Refer to Table 1.)



The LEARNED/TX LED flashes.

4 Next, while holding in the POWER button, press the button for the code in block B. (Refer to Table 7-2.) The operation is completed when the LEARNED/TX LED lights.



5 To continue registering other components, repeat steps 2 to 4.

This remote control unit can be used to operate components of other manufacturers without using the learning function by registering the manufacturer of the component as shown on Table 1.

Table 1: Combinations of Personal System Codes for Different Manufacturers

"VDP"

A \ B	CH SELECT	▲ CH VOL.	CH VOL. ▼
①	DENON A	DENON B	DENON C
② (PHONO)	DENON (DVD)	—	—
③ (CD)	MITSUBISHI	—	—
④ (TUNER)	PANASONIC	—	—
⑤ (DVD/VDP)	—	—	—
⑥ (TV/DBS)	SONY A	SONY B	SONY C
⑦ (DAT/TAPE MON)	PIONEER	—	—
⑧	—	—	—
⑨ (VCR-1)	—	—	—
⑩ (VCR-2/V.AUX)	—	—	—
⑪ /0	—	—	—
⑫ /E	PHILIPS	—	—
RF AUTO/MANUAL	RCA	—	—
ANALOG/DIGITAL	—	—	—
MODE	MAGNAVOX	—	—

"VCR"

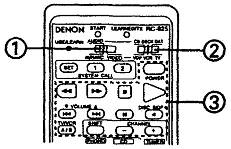
A \ B	CH SELECT	▲ CH VOL.	CH VOL. ▼
①	—	—	—
② (PHONO)	HITACHI A	HITACHI B	—
③ (CD)	MITSUBISHI A	MITSUBISHI B	MITSUBISHI C
④ (TUNER)	PANASONIC A	PANASONIC B	PANASONIC C
⑤ (DVD/VDP)	JVC (VICTOR)A	JVC (VICTOR) B	JVC (VICTOR) C
⑥ (TV/DBS)	SONY A	SONY B	SONY C
⑦ (DAT/TAPE MON)	PIONEER	—	—
⑧	TOSHIBA A	TOSHIBA B	—
⑨ (VCR-1)	SANYO A	SANYO B	—
⑩ (VCR-2/V.AUX)	SHARP A	SHARP B	—
⑪ /0	NEC A	NEC B	NEC C
⑫ /E	PHILIPS A	PHILIPS B	PHILIPS C
RF AUTO/MANUAL	RCA A	RCA B	—
ANALOG/DIGITAL	GENERAL ELECTRIC A	GENERAL ELECTRIC B	—
MODE	MAGNAVOX A	MAGNAVOX B	MAGNAVOX C

"TV"

A \ B	CH SELECT	▲ CH VOL.	CH VOL. ▼
①	—	—	—
② (PHONO)	DENON/HITACHI	—	—
③ (CD)	MITSUBISHI A	MITSUBISHI B	—
④ (TUNER)	PANASONIC A	PANASONIC B	—
⑤ (DVD/VDP)	JVC (VICTOR)	—	—
⑥ (TV/DBS)	SONY	—	—
⑦ (DAT/TAPE MON)	PIONEER	—	—
⑧	TOSHIBA	—	—
⑨ (VCR-1)	SANYO A	—	—
⑩ (VCR-2/V.AUX)	SHARP	—	—
⑪ /0	NEC A	—	—
⑫ /E	PHILIPS A	—	—
RF AUTO/MANUAL	RCA A	—	—
ANALOG/DIGITAL	GENERAL ELECTRIC A	GENERAL ELECTRIC B	—
MODE	MAGNAVOX A	—	—

NOTES:
- The signals for the pressed buttons are emitted while setting the preset memory. To avoid accidental operation, cover the remote control unit's transmitting window while setting the preset memory.
- Some models and years of manufacture of components of the manufacturers listed on Table 1 cannot be used.

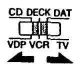
Operation after components are registered



1 Set the slide switch to "VIDEO".

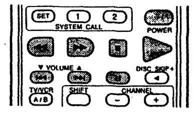
AUDIO
AVR/AVC VIDEO

2 Set the slide switch to the component to be registered (VDP, VCR or TV).



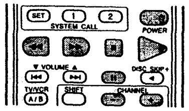
3 Use the buttons shown below to operate the video component. (Some models cannot be used.)
For details, refer to the respective component's manual.

a. VDP



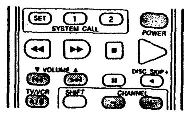
POWER : Power on/off
◀◀, ▶▶ : Manual search (reverse and forward)
■ : Stop
▶ : Play
I◀◀, ▶▶I : Auto search
II : Pause

b. VCR



POWER : Power on/off
◀◀, ▶▶ : Manual search (reverse and forward)
■ : Stop
▶ : Play
II : Pause
CHANNEL +, – : Channel selection

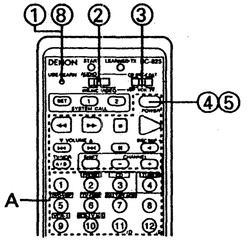
c. TV



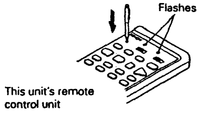
POWER : Power on/off
VOLUME ▲, ▼ : Volume up/down
TV/VCR : TV/video selection
CHANNEL +, – : Channel selection

Remote control unit learning function

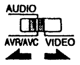
If your AV components are not DENON products or if operation is not possible with the preset memory settings, the components' remote control signals can be "learned" to enable remote control operation.
The buttons that can be "learned" are the CD, DAT and DECK system buttons (see page 19) and the VDP, VCR and TV system buttons (see page 21). (For the TV only, the A block buttons can also be "learned".)



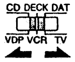
1 Press the USE/LEARN selector button with the tip of a pen etc., to set the learn mode. Both the START and LEARNED/TX indicators flash.


Flashes
This unit's remote control unit

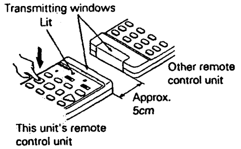
2 Set the program switch to the side to be "learned".
Set to the AUDIO side for the CD, tape deck or DAT position, to the VIDEO side for the VDP, VCR or TV position.



3 Set the program switch to the position to be "learned".



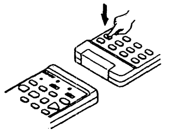
4 Set the remote control units so they are facing each other, then press the button to be "learned" on this unit's remote control unit.



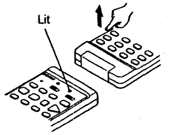
The indicator stops flashing and the START LED lights.
The learnable buttons are the buttons which can be operated with the DENON system codes for the CD player, DAT and tape deck, the buttons which can be operated with the preset memory for the VCR, VDP and TV. For the TV only, however, the buttons in the section indicated "A" on the diagram above can also be "learned". Use these to "learn" TV channels.

NOTE: Use button ⑪/0 as the 0 number button, button ⑫/E as the enter button.

5 Check that the START LED is lit, then press the button to be "learned" on the other remote control unit.



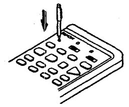
6 Once the START LED turns off and the LEARNED/TX LED lights, release the button on the other remote control unit.



The two LEDs start flashing again.

7 To "learn" other buttons, repeat steps 2 to 6.

8 Once the learning operation is completed, press the USE/LEARN selector button again.
The two LEDs stop flashing and the learning mode is cancelled.

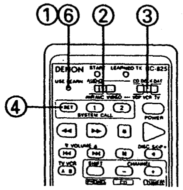


Check that the stored codes work properly.

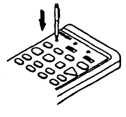
NOTES:

- Up to 26 codes can be "learned", but this number may be lower if the codes are long.
- If a non-learnable button is pressed or two or more buttons are pressed at once, the two LEDs will once again light when the button(s) is released.
- If the codes could not be stored, the LEARNED/TX LED does not light after the START LED turns off. For limited number of models, codes cannot be stored in RC-825.
- If the two LEDs start flashing rapidly after the START LED lights, this means that the memory is already full, and the code you have just attempted to store was not stored.
To "learn" that code, first perform the resetting operation.

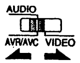
Clearing "learned" remote control signals and the preset memory settings



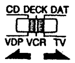
1 Press the USE/LEARN selector button with the tip of a pen, etc., to set the learn mode.



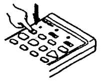
2 To clear "learned" remote control signals, set the slide switch to the position at which the signals were "learned". To clear the preset memory settings, set the slide switch to "VIDEO".



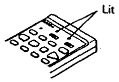
3 Set the slide switch to the position at which the signals were "learned" or at which the preset memory settings were set.



4 Press the SYSTEM CALL SET button, and hold it in for at least four seconds.



5 When both the START and LEARNED / TX LEDs light simultaneously, all the stored codes are cleared.

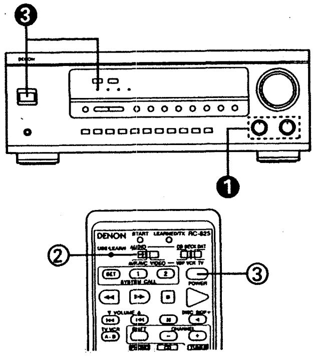


6 Press the USE/LEARN selector button.

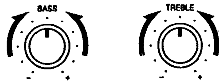
8 OPERATIONS

Preparations for playback

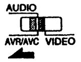
Preparations:
Check that all connections are proper.


❸
❶
②
③
DENON
POWER

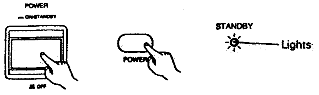
1 Set to the center position.


BASS
TREBLE
-
+

2 Set the remote control unit's slide switch to the AUDIO position. (only when operating with the remote control unit)

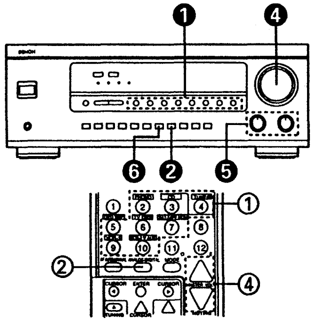

AUDIO
AVR/AVC
VIDEO

3 Turn on the power.
Press the POWER switch (button).

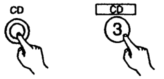

POWER
ON/STANDBY
OFF
POWER
STANDBY
Lights

- ▬ ON/STANDBY
  The power turns on and "STANDBY" indicator is lit.
  Several seconds are required from the time the power switch is set to the " ▬ ON/STANDBY" position until sound is output. This is due to the built-in muting circuit that prevents noise when the power switch is turned on and off.
  Set the POWER switch to this position to turn the power on and off from the included remote control unit (RC-825).
- ▬ OFF
  The power turns off and "STANDBY" indicator is off.
  In this position, the power cannot be turned on and off from the remote control unit.

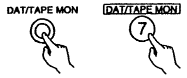
Playing the analog program source



1 Press the button for the program source to be played.
EX 1: CD

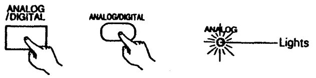


EX 2: DAT/TAPE


DAT/TAPE MON
DAT/TAPE MON
7

- Press the button once to switch the source to DAT/TAPE input, again to cancel DAT/TAPE input.

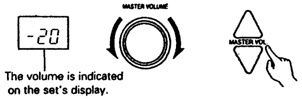
2 Select the ANALOG input mode.


ANALOG /DIGITAL
ANALOG/DIGITAL
ANALOG
Lights

Check that the "ANALOG" indicator is lit.

3 Start playback on the selected component.
For operating instructions, refer to the various components' manuals.

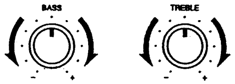
4 Adjust the MASTER VOLUME control.


MASTER VOLUME
-20
MASTER VOL

The volume is indicated on the set's display.

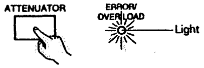
- The volume can be adjusted in units of 1 dB from −60 to 0 to +18 dB.

5 Adjust the BASS and TREBLE.


BASS
TREBLE
-
+

Turn the control clockwise to increase the bass or treble, counterclockwise to decrease it.

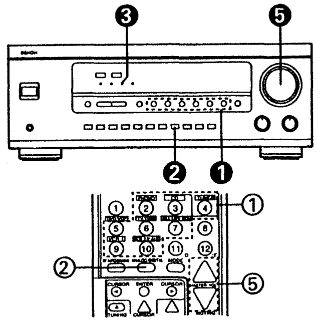
6 If the indicator lights when the "OVER LOAD" LED is lit, press the ATTENUATOR button.


ATTENUATOR
ERROR/ OVERLOAD
Light

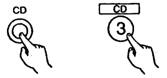
- The input level is lowered by -6 dB.

Notes:
- For digital input sources, there is no need to adjust the ATTENUATOR.
  (This button will not operate.)
- If the indicator does not turn off when this button is pressed, adjust the output level on the player.
- This button cannot be used when playing in the 6-channel EXT.IN mode.

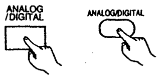
Playing the digital program source



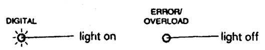
1 Press the button for the program source to be played that is connected to the digital input jacks.
EX: CD



2 Select the DIGITAL input mode.


ANALOG /DIGITAL
ANALOG/DIGITAL

3 Check that the "DIGITAL" indicator is lit.

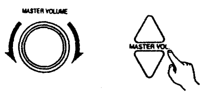

DIGITAL
light on
ERROR/ OVERLOAD
light off

When digital signals are input properly, the "ERROR / OVERLOAD" indicator is not lit.

* If the "ERROR/OVERLOAD" indicator is lit, check that the system setup's input setting (refer to page 15) and the connections are proper; that the component's power is turned on, etc.

4 Start playback on the selected component.
For operating instructions, refer to the various components' manuals.

5 Adjust the MASTER VOLUME control.

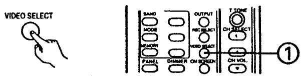

MASTER VOLUME
MASTER VOL

NOTE:
- NEVER try to play CD-ROM discs.
- If a CD-ROM is played, the "DIGITAL"indicator is lit green but no sound is heard.

Simulcast playback

Use this switch to monitor a video source other than the audio source.

1 Press the VIDEO SELECT button repeatedly until the desired source appears on the display.


VIDEO SELECT
①

The video source switches as follows each time the button is pressed:

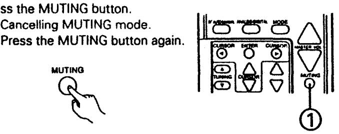
→ DVD/VDP → TV/DBS → VCR-1 → VCR-2/V-AUX →
SOURCE (= VIDEO SELECT : OFF) ←

* Cancelling simulcast playback.
- Select "SOURCE" using the video select button.
- Switch the program source to the component connected to the video.

Using the muting function

Use this to turn off the audio output temporarily.

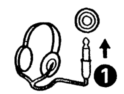
1 Press the MUTING button.
* Cancelling MUTING mode.
Press the MUTING button again.



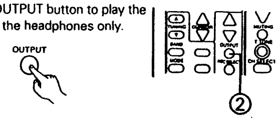
* **Caution:** Switching off the power of the unit and the remote control unit will cancel the settings.

Listen with headphones

1 Connect the headphones to the PHONES jack of the front panel.



2 Press the OUTPUT button to play the sound over the headphones only.



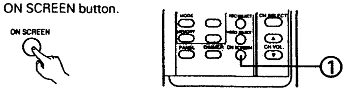
- The output to the speaker and pre-out jacks is turned off and no sound is produced from the speakers.

* **Caution:** Switching off the power of the unit and the remote control unit will cancel the settings.

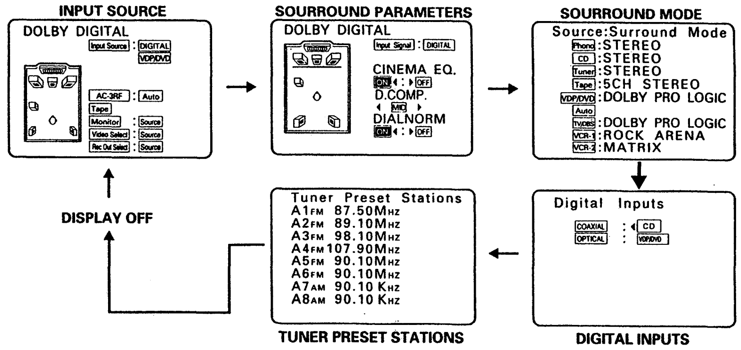
On screen display

The input and output sources and the surround setting, etc., are displayed on the monitor TV, so the various functions can be checked visually at a glance.

1 Press the ON SCREEN button.



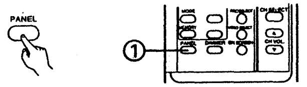
The display switches as follows each time the button is pressed (the following screens are examples):


INPUT SOURCE
DOLBY DIGITAL
Input Source : DIGITAL VDP/DVD
AC-3RF : Auto
Tape
Monitor : Source
Video Select : Source
Rec Out Select : Source
SOURROUND PARAMETERS
DOLBY DIGITAL
Input Signal : DIGITAL
CINEMA EQ.
ON : OFF
D.COMP.
MID
DIALNORM
ON : OFF
SOURROUND MODE
Source:Surround Mode
Phono :STEREO
CD :STEREO
Tuner :STEREO
Tape :5CH STEREO
VDP/DVD :DOLBY PRO LOGIC
Auto
TV/DBS :DOLBY PRO LOGIC
VCR-1 :ROCK ARENA
VCR-2 :MATRIX
Digital Inputs
COAXIAL : CD
OPTICAL : VDP/DVD
DIGITAL INPUTS
Tuner Preset Stations
A1FM 87.50MHZ
A2FM 89.10MHZ
A3FM 98.10MHZ
A4FM 107.90MHZ
A5FM 90.10MHZ
A6FM 90.10MHZ
A7AM 90.10 KHZ
A8AM 90.10 KHZ
TUNER PRESET STATIONS
DISPLAY OFF

Front panel display

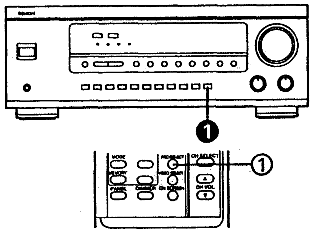
When an operation is performed on the main unit or on the remote control unit, that operation appears on the display, making it possible to check the operation visually.
The set's operating status can also be checked on the display using the procedure described below.

1 Press the PANEL button.

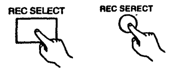


The input and output sources and the surround setting, etc., appear in order on the display each time the button is pressed.

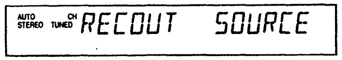
Recording the currently playing program source



1 Press the REC SELECT button and set the recording output to "SOURCE".



DISPLAY



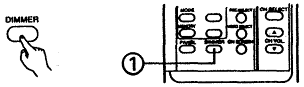
2 Set the cassette deck, video deck or other recording device to the recording mode.
For instructions, refer to the device's operating manual.

To record the sound from a tape deck, set the REC OUT mode to DAT/TAPE.

Using the dimmer function

Use this function to adjust the brightness of the main unit's display.

1 Press the DIMMER button.



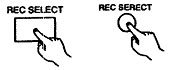
The brightness changes in the following order each time the button is pressed:

→ bright → medium → dim → display off →

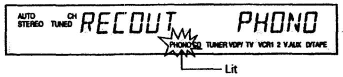
Recording using the REC OUT selector

Use the following procedure to record a source other than the one currently playing.

1 Press the REC SELECT button and set the recording output to the source to be recorded.



DISPLAY



Example: Source to be recorded set to PHONO

2 Set the video deck or other recording device to the recording mode.
For instructions, refer to the device's operating manual.

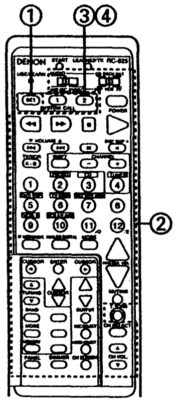
■ Tape monitor function

When a three–head tape deck is used, the sound actually being recorded can be monitored during recording by pressing the DAT/TAPE MONITOR button.
Press the button again to cancel monitoring.

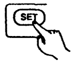
NOTES:
- Only the currently playing source can be recorded on the tape deck.
- Digital input signals cannot be recorded. To record, connect to the analog input terminals.
- It is not possible to record between the video jack and the S–video jack.
- If the input function is set to PHONO, CD or TUNER when "TV/DBS" is selected with the REC OUT selector, the picture signals selected with the "TV/DBS" setting are output from the MONITOR OUT terminal.

System call (remote control unit)

This function allows you to preset frequently used operation patterns in the remote control unit then automatically send a series of up to ten remote control codes with a single button.

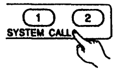


1 **Presetting**
Press the SET button.

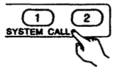


2 Press the buttons for the codes to be sent, changing the position of the slide switch as necessary. (Up to ten buttons can be set.)
Buttons which have been "learned" and buttons which have been preset can also be selected.

3 Press the SYSTEM CALL button ("1" or "2") at which you want to store the codes.
The setting is now stored.



4 **Recalling**
Press the SYSTEM CALL button ("1" or "2") at which the desired codes have been stored.
The series of codes is now sent.



9 USING THE SURROUND FUNCTION

Dolby Surround

This unit is equipped with digital signal processing sections for decoding and reproducing movie soundtracks the same way as in movie theaters.

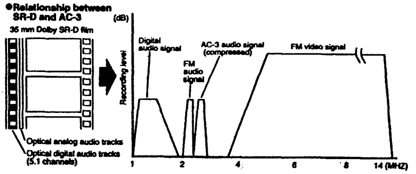
1. DOLBY PRO LOGIC

When using conventional video tapes, laser discs, TV programs or CDs with the DOLBY SURROUND mark, Dolby Pro Logic provides extremely natural sound movement and positioning, immersing you in the on screen action. Pro Logic uses a directional emphasis circuit to decode four output channels (front left and right, center and surround) from the two audio channels provided on the software.
This set is equipped with four Dolby Pro Logic play modes: Normal, Phantom, Wide and 3–channel. The set automatically selects the optimum mode according to the system setup's speaker configuration settings.

2. DOLBY DIGITAL

When you connect the DVD player or an LD player with an AC–3RF output to the AC–3RF input terminal and play DVD, laser discs with DOLBY DIGITAL (or DOLBY SURROUND AC-3 DIGITAL) mark, you can experience improved sound spatiality, positioning, and impact compared with Pro Logic. This is because Dolby Digital delivers up to 5 totally discrete, full frequency audio channels (front left and right, center, and surround left and right), plus a bass–only effects channel. Since the signal is digital from the input of the program source until to the output of this unit, a higher quality and clarity of surround sound results.
Dolby Digital AC–3 (Audio Coding 3) is a system developed by Dolby Laboratories that transmits 5.1 channels of digital signals. The surround system developed for movie theaters using this system is called "Dolby SR–D (Surround Digital)". Whereas the conventional Dolby Pro Logic Surround is an analog matrix system, Dolby SR–D is a digital discrete system in which the different channels are completely independent. This makes it possible to achieve a realistic sound field with a "three–dimensional" feel, giving the sound a sense of distance, movement and relative position, and creating a surprisingly real and powerful sense of presence when playing movie software in AV rooms.
There are "5.1 ch" playback channels: three front channels (front left, center and front right), two surround channels (surround left and surround right), plus "0.1 channel" called LFE (Low Frequency Effect) for low bass effect sounds of 120 Hz or less. The signals are recorded on the software in fully discrete fashion, eliminating crosstalk between channels and making it possible to control the sound field in the listening/viewing space with greater precision.
In addition, the frequency range of the five channels extends up to 20 kHz, (the same as CDs,) resulting in clear sound with greater richness of expression.

●Relationship between SR-D and AC-3



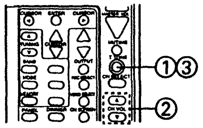
● Dolby Digital and Pro Logic

Home surround methods	Dolby Digital	Dolby Pro Logic
No. recording channels (material)	5.1 ch	2 ch
No. playback channels	5.1 ch	4 ch
Playback channels	L, R, C, SL, SR and SW	L, R, C, S (SW recommended)
Audio processing	Digital discrete processing, AC–3 encoding/decoding	Analog matrix processing, Dolby Surround
Upper reproduction limit of surround channel	20 kHz	7 kHz

Manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby," "AC–3", "Pro Logic" and the double–D symbol are trademarks of Dolby Laboratories Licensing Corporation. Copyright 1992 Dolby Laboratories, Inc. All rights reserved.

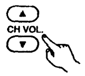
Before playing with the surround function

Before playing with the surround function, be sure to use the test tones to adjust the playback level from the different speakers. This adjustment can be performed with the system setup (see page 14, 15) or from the remote control unit, as described below.
Adjusting with the remote control unit using the test tones is only possible in the "Auto" mode and only effective in the DOLBY PRO LOGIC and DOLBY DIGITAL modes. The adjusted levels are automatically stored in the memory.

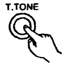


1 Press the test tone button.

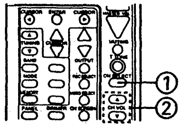
2 Test tones are output from the different speakers. Use the channel volume adjust buttons to adjust so that the volume of the test tones is the same for all the speakers.



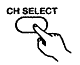
3 After completing the adjustment, press the test tone button again.



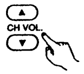
After adjusting using the test tones, adjust the channel levels either according to the playback sources or to suit your tastes, as described below.



1 Press the channel select button to select the speaker to be adjusted.

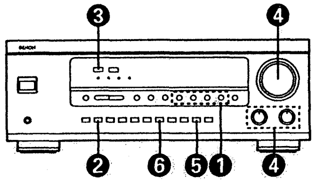


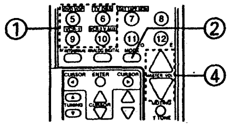
2 Adjust the level of the selected speaker.



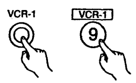
Using the Dolby Pro Logic mode

Play a pre-recorded source with the DOLBY SURROUND mark.

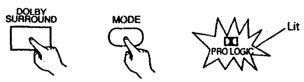




1 Press the button for the program source to be played. **EX: VCR-1**

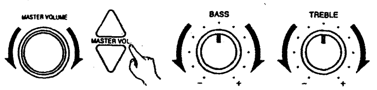


2 Set the DOLBY SURROUND mode.



3 Start playback on the selected component.
For operating instructions, refer to the various components' manuals.

4 Adjust the MASTER VOLUME and TONE controls.

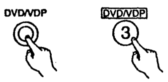


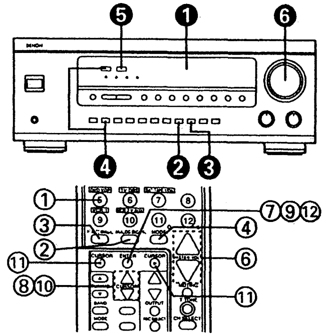
5 Press the CINEMA EQ button when playing back movie video software and the speech portion is felt to be harsh upon the ears. The output frequency response of the center and front speakers becomes closer to that in a theater and the sound becomes more pleasant to the ears.

Using the Dolby Digital mode

Play a pre-recorded source (LD or DVD) with the DOLBY SURROUND AC-3 DIGITAL mark.

1 Press the DVD/VDP button.

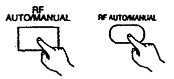




2 Select the DIGITAL input mode.

ANALOG /DIGITAL
ANALOG/DIGITAL

3 Select the audio input mode. The mode switches as shown on the right each time the button is pressed.



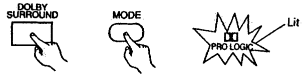
→ DVD AUTO → DVD AC-3RF → DVD/VDP →

DVD AUTO	Some video discs with Dolby Digital AC-3 audio have only digital or analog audio. When using such discs, this mode automatically switches the audio input according to the type of audio Dolby Digital (AC-3), digital or analog) being played.
DVD AC-3RF	Only the Dolby Digital (AC-3) audio is played.
DVD/VDP	The audio is input according to the analog/digital input setting on the main unit or remote control unit.

NOTES:

- In the "DVD AUTO" mode, when the mode changes from pause, chapter search, etc., to playback during playback of the Dolby Digital audio on an LD, the PCM or analog sound may be output momentarily before the mode is switched to the Dolby Digital audio mode. If this happens, the sound will not be interrupted if you switch to the "DVD AC-3RF" (AC-3RF fixed input) mode.
- The audio input mode setting is reset to "DVD AUTO" when the power is turned off using the power switch on the remote control unit or on the main unit.

4 Set the DOLBY SURROUND mode.

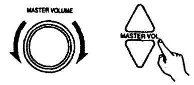


5 Start playback on the selected component.
For operating instructions, refer to the various components' manuals.
When Dolby Digital (AC-3) encoded signals are played, the PRO LOGIC indicator turns off and the Dolby Digital indicator lights.

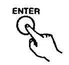
- The PRO LOGIC indicator lights when a 2-channel Dolby Digital (AC-3) signal is input.

DIGITAL
Lit

6 Adjust the MASTER VOLUME control.



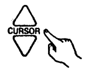
7 Set the surround parameter on the monitor according to the source and adjust the tone.
First press the ENTER button.



Menu
▹System Setup
▾ Surround Parameters

Menu Off

8

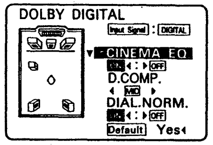


Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Surround Parameters".

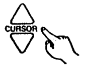
System Setup
☞Surround Parameters

9

Press the ENTER button to switch the screen.

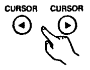


10

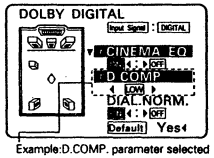


Use the CURSOR △ and ▽ buttons to set the ☞ mark to the parameter to be set.

11



Use the CURSOR ◀ and ▶ buttons to set the parameter. Display or highlight the characters for the desired setting.



Example:D.COMP. parameter selected and set to LOW.

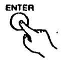
■ Surround parameters

CINEMA EQ.	Use "CINEMA EQUALIZER" if dialogue audio truck sound scratchy when playing movie software. (The higher frequency component is lowered.) (Only effective in the Dolby Pro Logic, Dolby Digital modes.) This parameter can also be turned on and off with the CINEMA button on the main unit.
D. COMP.	"DYNAMIC RANGE COMPRESSION" compresses the dynamic range. This is only effective for Dolby Digital program sources. — There are four parameters: "OFF" ↔ "LOW" ↔ "MID" ↔ "HIGH" (Only effective in the Dolby Digital modes.)
DIAL. NORM.	"DIALOG NORMALIZATON" automatically adjusts the playback level during source playback to the optimum value. This parameter is only valid for settings that use the center surround speaker with Dolby Digital program sources and in the "Speaker Configuration" screen of the "Systems Setup" menu. (Only effective in the Dolby Digital modes.)

NOTE: "DIAL. NORM." automatically restores the power to "ON" when the power of the unit has been switched "OFF".

∗ The settings are reset to the factory settings when the ☞ mark is set to "Default" "Yes" is highlighted. (Refer to page 34.)

12



Press the ENTER button to enter the setting.

∗ If for a certain source you feel that the bass is too strong, adjust the LFE level in the system setup's DOLBY DIGITAL setting. (Refer to page 16.)

NOTE:
- With the this model, **Dolby Digital encoded signals can only be played in the Dolby Pro Logic, Dolby Digital and STEREO modes.** Other surround mode buttons will not function during the Dolby Digital signal playback.
- When playing back in the Dolby Pro Logic mode, depending on the settings of each output channel, it may not be possible to make a setting of the master volume that exceeds −3 dB.

DSP surround simulation

This unit is equipped with a high precision D.S.P. (Digital Signal Processor) for processing signals digitally to simulate sound fields. Select the surround mode according to the playback source and adjust the parameters according to the conditions in the listening room to achieve realistic venue ambience.

■ Types of surround modes and their characteristics

1	STEREO	Sound is produced from the two front channels. (Nothing is output from the Surround and center channels.)
2	6CH EXT. IN	Connect the output of the external Dolby Digital decoder to this unit's 6 CH EXT IN.
3	5CH STEREO	The signals of the left and right channels are distributed to the different speakers to achieve a stereo sound from all directions at the listening position.
4	MATRIX	Use this to enjoy stereo music sources with rich reverberations.
5	MONO MOVIE	In this mode, a sense of expansion is added to monaural audio sources. This mode is best suited for playing old movies or movie tapes recorded in monaural.
6	ROCK ARENA	The powerful reverberations of this mode produce a sound field which recreates the excitement of live concerts. This mode is effective for rock, popular music, etc.
7	JAZZ CLUB	This mode creates the sound field of a live house with a low ceiling and hard wall reverberations. The result is that the artist seems to be performing right before your eyes.
8	VIDEO GAME	Use this to enjoy video game sources.

∗ Depending on the program source being played, the effect may not be very noticeable.
In this case, try other surround modes, without worrying about their names, to create a sound field suited to your tastes.

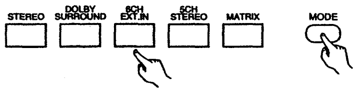
Personal Memory Plus function .... for EASY USE

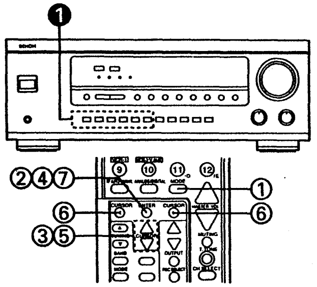
This unit automatically stores the surround mode adding selected effects for all input sources. The corresponding surround mode is recalled automatically each time an input source is selected.

Using the DSP surround simulation

Preparations: Select the input device and start playback.

1 Select the surround mode according to the input source.





DSP SIMULATION

The surround mode switches in the following order each time the DSP SIMULATION button is pressed:

→ MONO MOVIE → ROCK ARENA → JAZZ CLUB → VIDEO GAME →

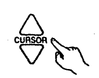
2

Set the surround parameter on the monitor according to the source and adjust the tone.
First press the ENTER button.

※ Displayed only when the input source is "TUNER".

Menu
☞System Setup
Surround Parameters
Tuner Preset Stations—※
Menu Off

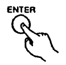
3



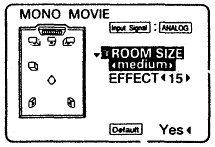
Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Surround Parameters".

System Setup
▲
☞Surround Parameters
▼Tuner Preset Stations
Menu Off

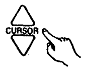
4



Press the ENTER button to switch the screen.
(The diagram at the right shows an example of the display for when the surround mode is set to MONO MOVIE.)



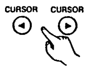
5



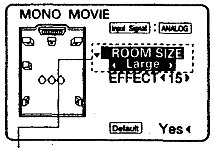
Use the CURSOR △ and ▽ buttons to set the ☞ mark to the parameter to be set.

- The parameters that can be set differ according to the surround mode. For details, see the table below.

6



Use the CURSOR ◀ and ▶ buttons to set the parameter. Display or highlight the characters for the desired setting.



Example:ROOM SIZE parameter selected and set to Large.

■ Surround parameters

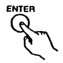
ROOM SIZE .... "Room size" refers to the size of the sound field. — There are five parameters: "Small" ↔ "med.S." ↔ "medium" ↔ "med.L." ↔ "large"

EFFECT LEVEL ...... "Effect level" refers to the strength of the effect sounds. If the sound becomes distorted, lower the level. Parameter "1" ~ "15"

DELAY TIME .... This can be set to between 0 and 140 msec for the MATRIX mode.

⁎ The settings are reset to the factory settings when the ☞ mark is set to "Default" and "Yes" is highlighted. (See the table below.)

7



Press the ENTER button to enter the setting.

NOTES:

⁎ For analog sound only, if the ERROR/OVERLOAD indicator lights during playback, press the ATTENUATOR button on the main unit to lower the input level by -6 dB so that the indicator does not light. Note that when playing back the 6 CH EXT. IN mode, the setting of the INPUT ATTENUATOR is invalid and that it is operable.

- When the mode is switched to Dolby Digital encoded signals while playing PCM digital signals or analog signals in the surround modes except STEREO, the mode is **forcibly switched to the Dolby Surround mode. 6 CH EXT. IN, 5 CH STEREO, MATRIX, MONO MOVIE, ROCK ARENA, JAZZ CLUB or VIDEO GAME.**
- To listen to the signal of equipment that is connected to the "5.1 CH EXT. IN" input jack, make sure the video input of the equipment is selecting the connected function and select "5.1 CH EXT. IN" with the "5.1 CH EXT. IN" mode button or with the remote control mode button.

■ Surround modes and parameters

The following table shows the presence or absence of signals in the various modes, and whether or not they can be controlled.
Initial settings are indicated in parentheses.

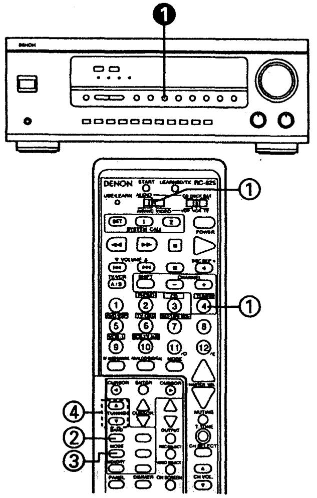
MODE	OUTPUT CHANNEL (0 dB)				PARAMETER SOURCE						When playing Dolby Digital (AC-3) data
	FRONT L/R	CENTER	SURROUND	SUBWOOFER	CINEMA EQ	ROOM SIZE	EFFECT LEVEL	DELAY TIME	D. COMP.	DIALNORM	
STEREO	○	×	×	◎	×	×	×	×	○Dolby Digital (AC-3) SOURCE ONLY (OFF)	×	○
DOLBY PRO LOGIC	○	◎	◎	◎	○(OFF)	×	×	×	○Dolby Digital (AC-3) SOURCE ONLY (OFF)	○Dolby Digital (AC-3) SOURCE ONLY (ON)	○
DOLBY DIGITAL	○	◎	◎	◎	○(OFF)	×	×	×	○(OFF)	○(ON)	○
6CH EXT IN	○	◎	◎	◎	×	×	×	×	×	×	×
5CH STEREO	○	◎	◎	◎	×	×	×	×	×	×	×
MATRIX	○	◎	◎	◎	×	×	×	○(30 msec)	×	×	×
MONO MOVIE	○	◎	◎	◎	×	○(Medium)	○(10)	×	×	×	×
ROCK ARENA	○	◎	◎	◎	×	○(Medium)	○(10)	×	×	×	×
JAZZ CLUB	○	◎	◎	◎	×	○(Medium)	○(10)	×	×	×	×
VIDEO GAME	○	◎	◎	◎	×	○(Medium)	○(10)	×	×	×	×

○ : Signal present or controllable.
△ : Select one according to the speaker configuration setting.
◎ : Can be turned on and off according to the speaker configuration setting.
× : No signal or not controllable.

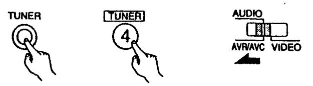
- The "INPUT ATTENUATOR" can only operate with analog inputs. The initial setting value is "0 dB". Note that this button is stored with each input source.

10 LISTENING TO THE RADIO

Auto tuning

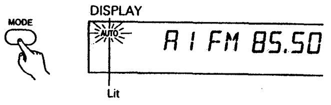


1 Set the input function to "TUNER".

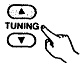


2 Watching the display, press the BAND button to select the desired band (AM or FM).

3 Press the MODE button to set the auto tuning mode.



4 Press the TUNING UP or DOWN button.



- Automatic searching begins, then stops when a station is tuned in.

NOTE:

- When in the auto tuning mode on the FM band, the "STEREO" indicator lights on the display when a stereo broadcast is tuned in. At open frequencies, the noise is muted and the "TUNED" and "STEREO" indicators turn off.

Manual tuning

1 Set the input function to "TUNER".

2 Watching the display, press the BAND button to select the desired band (AM or FM).

3 Press the MODE button to set the manual tuning mode. Check that the display's "AUTO" indicator turns off.

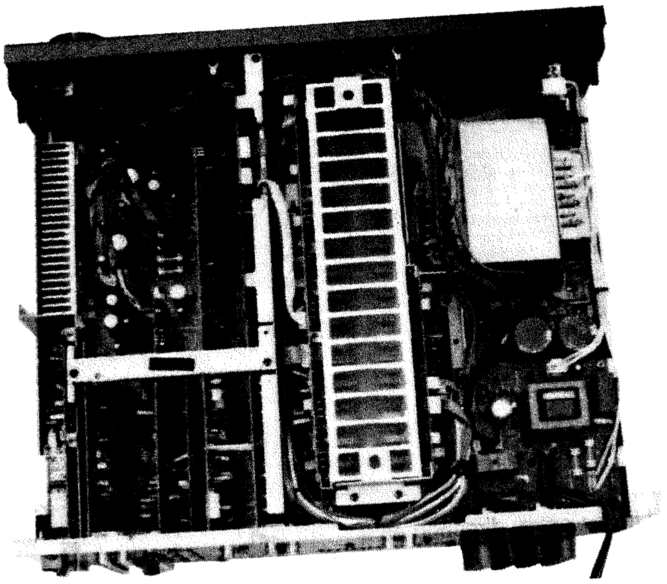
4 Press the TUNING UP or DOWN button to tune in the desired station.
The frequency changes continuously when the button is held in.

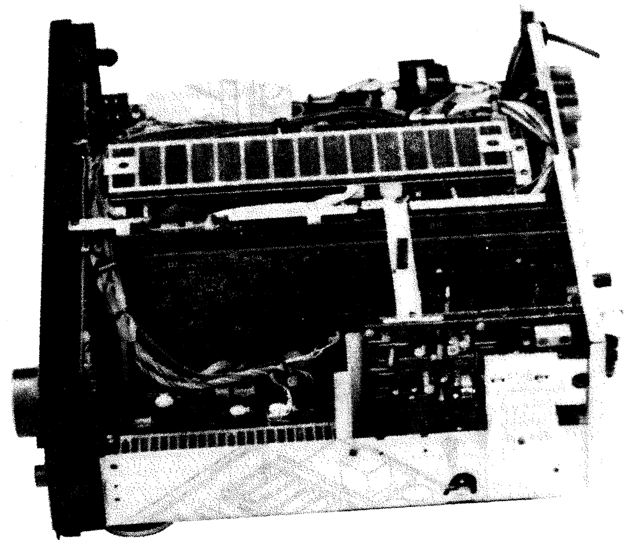
NOTE:

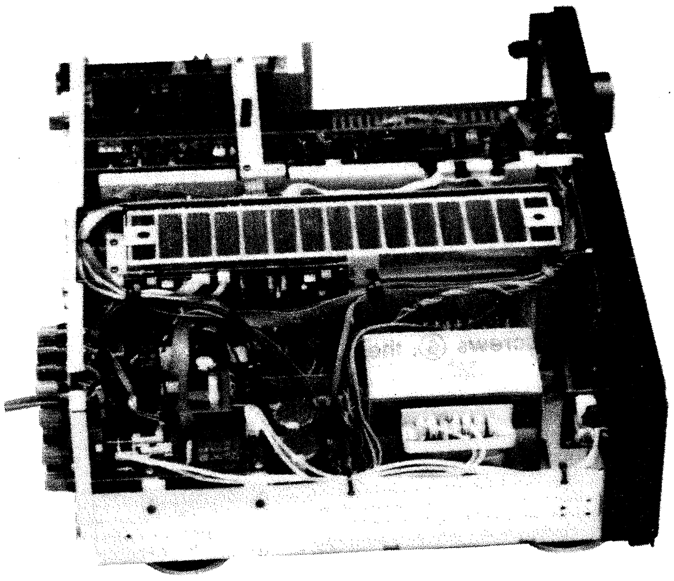
- When the manual tuning mode is set, FM stereo broadcasts are received in monaural and the "STEREO" indicator turns off.

WIRE ARRANGEMENT

In case of wires require unclasping or loosening to move the location to perform adjustment or part replacement, be sure to rearrange them neatly to restore properly in the same location as they were originally placed, or causing to produce a noise may occasionally occur.





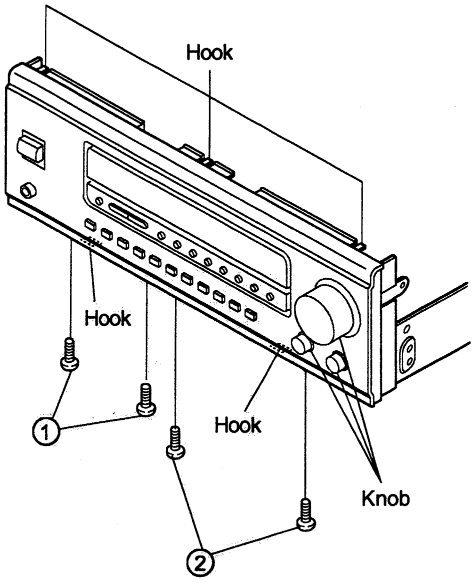


DISASSEMBLY

(To reassemble reverse disassembly)

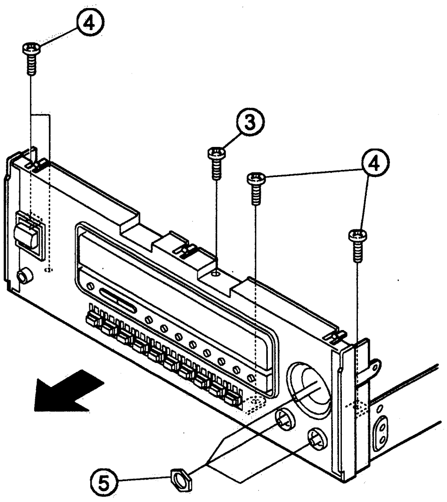
1. Front Aluminium Panel

1) Pull out 3 Knobs.
2) Remove 2 screws ① and 2 screws ②.
3) Unfasten 3 upper hooks and 2 below hooks.



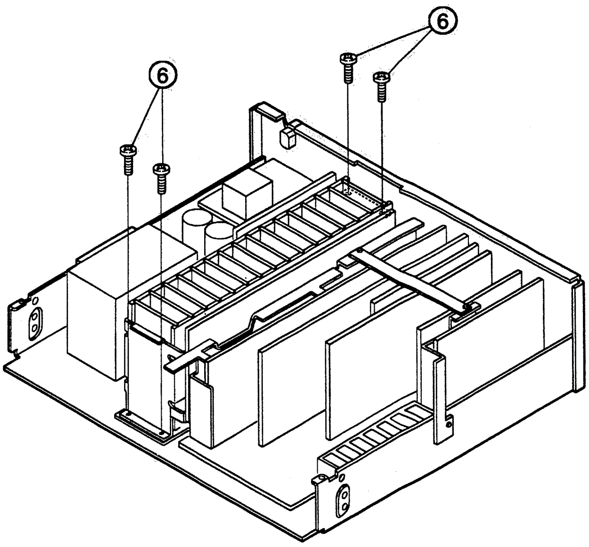
2. Front Mold Panel

1) Remove a screw ③ and 4 screws ④.
2) Remove 3 nuts ⑤.
3) Detach the Front Mold Panel in the arrow direction as it connects with connectors.



3. Power Amp. Unit

Remove 4 screws ⑥, then pull out the Power Amp. Unit upwards.

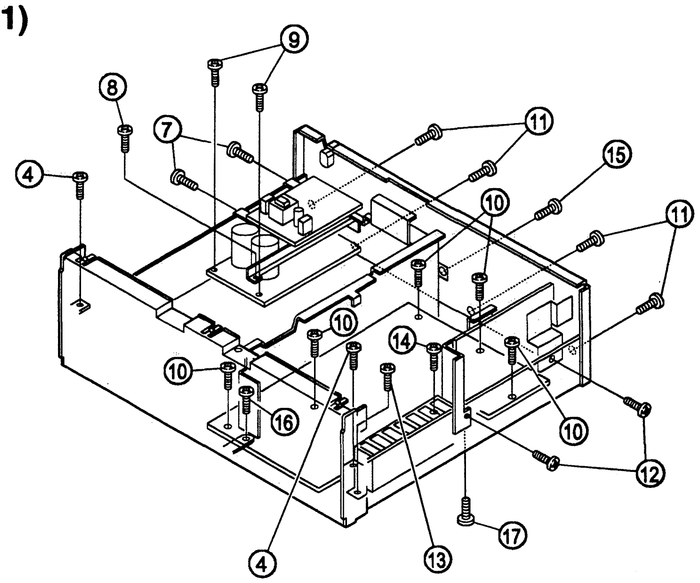


4. When Maintenance for Main Unit (1U-2994-1)

● In case the Power Supply is ON

1) Remove 2 screws ④ fixing the Front Mold Panel when detached the Front Aluminium Panel and the Power Amp. Unit.
2) Remove 3 screws ⑦ and ⑧ fixing the bracket.
3) Remove 2 screws ⑨ fixing the Power Supply Unit.
4) Remove 5 screws ⑩ fixing the Main Unit (1U-2994-1).
5) Remove 4 screws ⑪ fixing the Rear Panel.
6) Remove 2 screws ⑫ fixing the Tuner Unit.
7) Remove a screw ⑰.

Then separate the chassis only for maintenance.



● In case the Power Supply is OFF

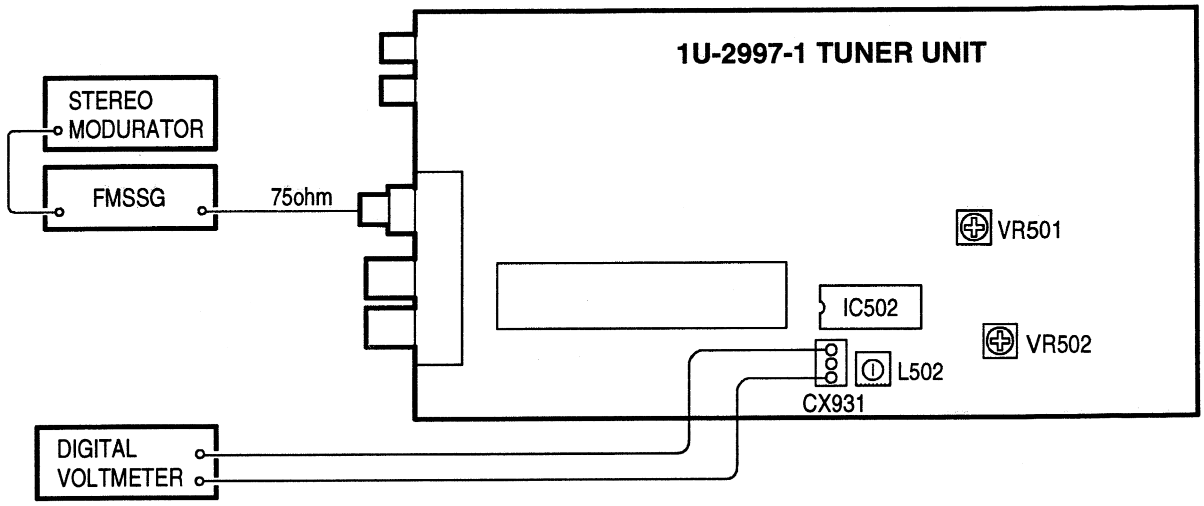
1) Remove 7 screws ⑩ and ⑯, ⑰ fixing the Main Unit (1U-2994-1).
2) Remove 3 screws ⑪ and ⑮ fixing the Rear Panel.
3) Remove a screw fixing the Preout Unit (1U-2997-5) of the Rear Panel side, and two below screws.
4) Remove 4 screws fixing the SP terminal of the Rear Panel side and 2 screws fixing the AC Outlets.

ADJUSTMENT

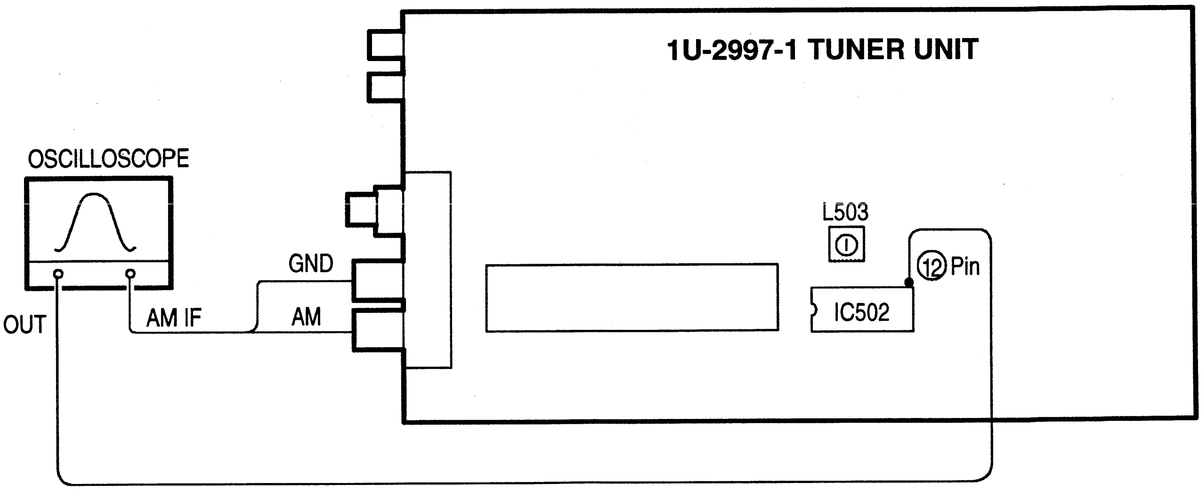
Tuner Section

CONNECTION DIAGRAM OF MEASURING INSTRUMENTS

- **FM**


1U-2997-1 TUNER UNIT
STEREO MODURATOR
FMSSG
75ohm
VR501
IC502
VR502
L502
CX931
DIGITAL VOLTMETER

- **AM**


1U-2997-1 TUNER UNIT
OSCILLOSCOPE
OUT
AM IF
GND
AM
L503
⑫Pin
IC502

FM/MPX ALIGNMENT

Step	Alignment Item	Tuning Frequency Setting	Input					Output		Adjust		Remarks
			Type	Frequency	Input Level	Modulation	Coupling	Type	Connect to	Points	Adjust to	
1	Tuning Center	98.1 MHz	FM SSG	98.1 MHz	60 dBμ	None	Antenna Terminal	Digital Voltmeter	CX931	L502	± 50mV	Function : FM Mode : Auto
2	Separation	98.1 MHz	FM SSG	98.1 MHz	60 dBμ	Stereo (L) 1KHz 100%	Antenna Terminal	AC Voltmeter	AUDIO OUT Terminal (R)	VR502	Maximum Separation	—
3	Signal Level	98.1 MHz	FM SSG	98.1 MHz	20 dBμ	Off	Antenna Terminal	—	—	VR501	Light "TUNED" FLD Character	—

AM ALIGNMENT

Step	Alignment Item	Frequency	Input	Output		Adjustment		Remarks
				Type	Connect to	Points	Adjust to	
1	IF	—	IF SWEEP (Input level is not over to work A.G.C.)	Oscilloscope	IC502 12Pin	L503	Maximum height and best symmetry curve	

Audio Section

Idling Current (1U-2995-2, 1U-2995-3)

Required measurement equipment : DC Voltmeter

Arrengement

(1) Avoid direct blow from an air conditioner or an electric fan, and adjust the unit at normal room tempereture 15 °C ~ 30 °C (59 °F ~ 86 °F).

(2) Presetting
- POWER (Power sourse switch) → OFF
- VOLUME (Volume control) → "---" : fully counterclockwise (↺ min.)
- BASS, TREBLE (Tone control) → FLAT: (Controls to center)
- SPEAKER-A (Speaker terminal) → No load (Do not connect speaker, dummy resistor, etc.)

Adjustment

(1) Remove top cover and set VR701, VR702, VR801 on 1U-2995-2 (Front Amp Unit) and VR901, VR902 on 1U-2995-3 (Surround Amp Unit) at counterclockwise (↺) fully.

(2) Connect DC Voltmeter to test points (FRONT-Lch: TP701, FRONT-Rch: TP702, CENTER ch: TP801, SURROUND-Lch: TP901, SURROUND-Rch: TP902).

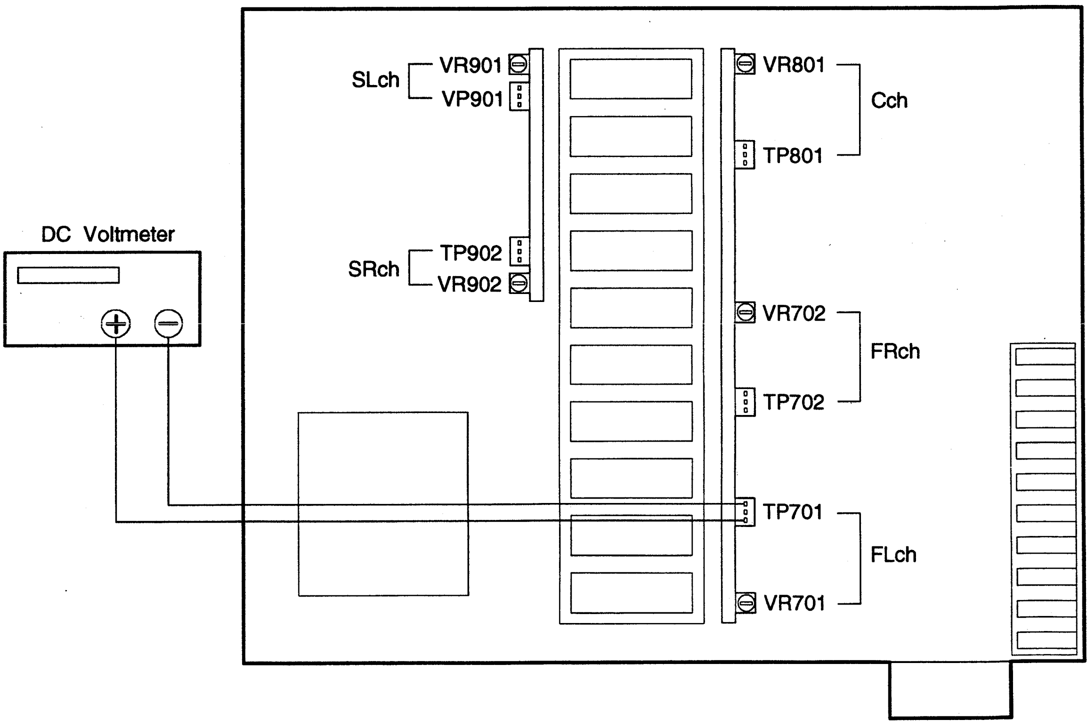
(3) Connect power cord to AC Line, and turn power switch "ON".

(4) Presetting.
MODE : 5ch STEREO
FUNCTION : CD

(5) Allow 2 minutes, and turn VR701 clockwise (↻) and adjust the TEST POINTS voltage to 1.5 mV ±0.5 mV DC.

(6) After 10 minutes from preset, turn VR701 to set the voltage to 3 mV ±0.5 mV DC.

(7) Adjust the Variable Resistors of other channels in the same way.



DIGITAL/ANALOG, SURROUND MODE IN EACH INPUT FUNCTION AND INITIAL SETTING OF DIGITAL FUNCTION

INPUT FUNCTION	DIGITAL/ANALOG	SURROUND MODE	DIGITAL FUNCTION
PHONO	FORCED ANALOG	STEREO	INFEASIBLE TO SET
CD	ANALOG	STEREO	COAXIAL
TUNER	FORCED ANALOG	STEREO	INFEASIBLE TO SET
DVD/VDP	ANALOG	DOLBY PRO LOGIC	OPTICAL-1
TV/DBS	ANALOG	STEREO	OFF
VCR-1	ANALOG	DOLBY PRO LOGIC	OFF
VCR-2/V.AUX	ANALOG	STEREO	OFF
DAT/TAPE	FORCED ANALOG	STEREO	OFF

INITIAL SETTING OF EACH MODE

	FRONT L LEV.	FRONT R LEV	CENTER LEVEL	SURROUND L LEV	SURROUND R LEV	S. WOOFER LEVEL	INPUT ATTENUATOR	ROOM SIZE	EFFECT LEVEL	DELAY TIME	CINEMA EQ	DIALOG ✻1	DYNAMIC ✻1
STEREO	0 dB	0 dB	—	—	—	0 dB	0 dB	—	—	—	—	ON	OFF
6CH EXT. IN	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	—	—	—	—	—	—	—
5CH STEREO	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	—	—	—	—	—	—	—
DOLBY AC-3 or DOLBY PROLOGIC	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	—	—	—	OFF	ON	OFF
MONO MOVIE	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	MED	10	—	—	—	—
ROCK ARENA	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	MED	10	—	—	—	—
JAZZ CLUB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	MED	10	—	—	—	—
VIDEO GAME	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	MED	10	—	—	—	—
MATRIX	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	—	—	30m sec	—	—	—

✻1 : Conditions in case for setting AC-3 data to ZR38600.

Others:
- Set REC SELECT to SOURCE.
- Set TAPE MONITOR to OFF.
- Set VIDEO SELECT to OFF.
- Set MASTER VOL to -∞.
- Each input should be set to analog input.
- Set TEST TONE to OFF.
- In case DEFAULT is selected for SURR. PARAMETERS setting menu, sets the appropriate parameter of ROOM SIVE, EFFECT LEVEL, DELAY, CINEMA, D. COMP to the initial value of above table.

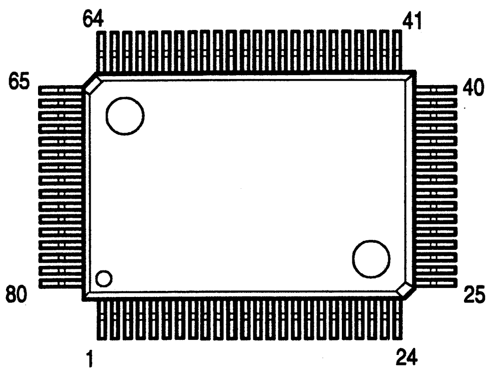
SEMICONDUCTORS

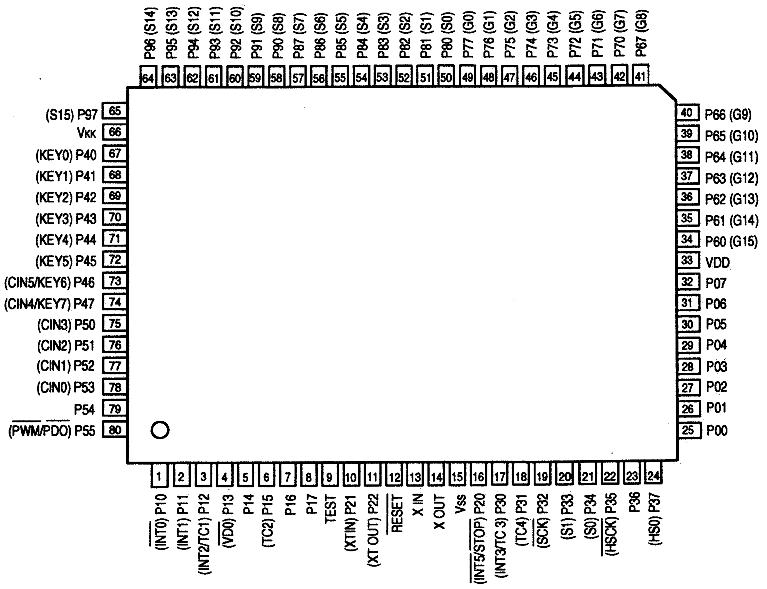
● IC's

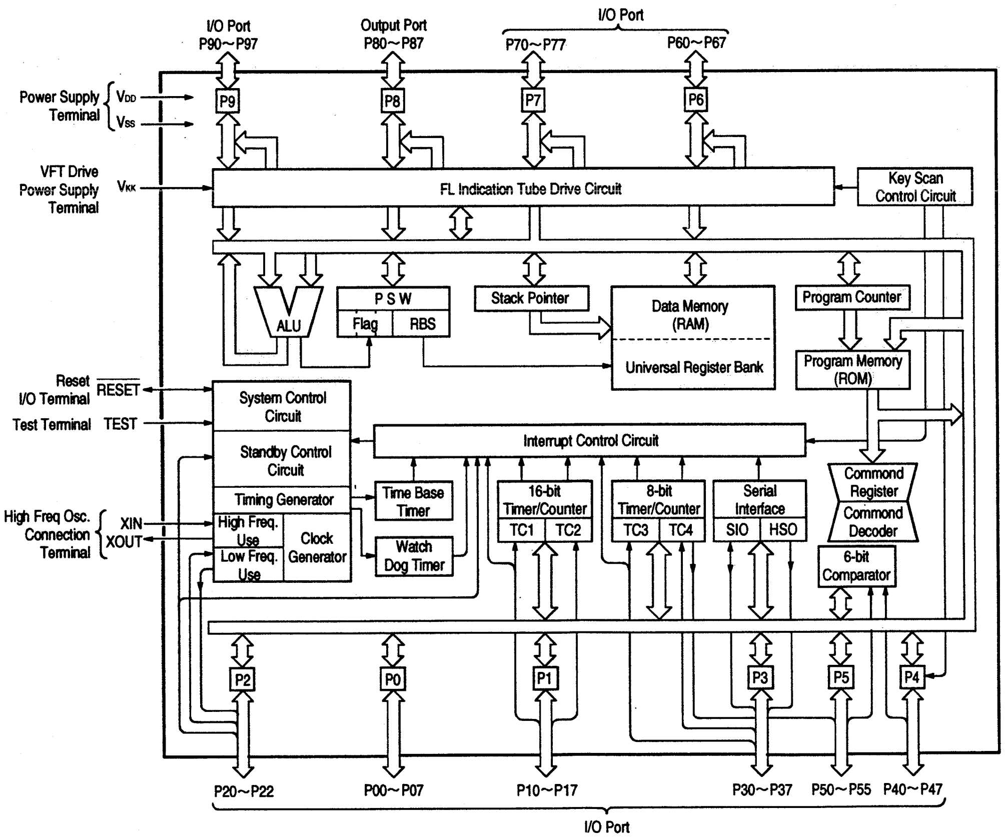
Note: Indications before IC numbers denote P.W.B. name.

MA : Main P.W.B. Unit
PA : Power Amp Unit
VI : Video & Display Unit
TU : Tuner Unit
AU : Audio & DSP Unit
EV : E. Vol Unit

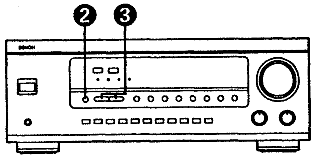
TMP87CS71F-**** (MA: IC113)

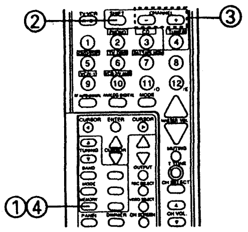

64
41
65
40
80
25
1
24


P96 (S14) 64
P95 (S13) 63
P94 (S12) 62
P93 (S11) 61
P92 (S10) 60
P91 (S9) 59
P90 (S8) 58
P87 (S7) 57
P86 (S6) 56
P85 (S5) 55
P84 (S4) 54
P83 (S3) 53
P82 (S2) 52
P81 (S1) 51
P80 (S0) 50
P77 (G0) 49
P76 (G1) 48
P75 (G2) 47
P74 (G3) 46
P73 (G4) 45
P72 (G5) 44
P71 (G6) 43
P70 (G7) 42
P67 (G8) 41
(S15) P97 65
VKK 66
(KEY0) P40 67
(KEY1) P41 68
(KEY2) P42 69
(KEY3) P43 70
(KEY4) P44 71
(KEY5) P45 72
(CIN5/KEY6) P46 73
(CIN4/KEY7) P47 74
(CIN3) P50 75
(CIN2) P51 76
(CIN1) P52 77
(CIN0) P53 78
P54 79
(PWM/PDO) P55 80
40 P66 (G9)
39 P65 (G10)
38 P64 (G11)
37 P63 (G12)
36 P62 (G13)
35 P61 (G14)
34 P60 (G15)
33 VDD
32 P07
31 P06
30 P05
29 P04
28 P03
27 P02
26 P01
25 P00
1 (INT0) P10
2 (INT1) P11
3 (INT2/TC1) P12
4 (VD0) P13
5 P14
6 (TC2) P15
7 P16
8 P17
9 TEST
10 (XTIN) P21
11 (XT OUT) P22
12 RESET
13 X IN
14 X OUT
15 Vss
16 (INT5/STOP) P20
17 (INT3/TC 3) P30
18 (TC4) P31
19 (SCK) P32
20 (S1) P33
21 (S0) P34
22 (HSCK) P35
23 P36
24 (HS0) P37


I/O Port
P90~P97
Output Port
P80~P87
I/O Port
P70~P77
P60~P67
Power Supply Terminal
VDD
VSS
P9
P8
P7
P6
VFT Drive Power Supply Terminal
VKK
FL Indication Tube Drive Circuit
Key Scan Control Circuit
ALU
P S W
Flag
RBS
Stack Pointer
Data Memory (RAM)
Universal Register Bank
Program Counter
Program Memory (ROM)
Reset I/O Terminal
RESET
Test Terminal
TEST
System Control Circuit
Standby Control Circuit
Timing Generator
High Freq Osc. Connection Terminal
XIN
XOUT
High Freq. Use
Low Freq. Use
Clock Generator
Time Base Timer
Watch Dog Timer
Interrupt Control Circuit
16-bit Timer/Counter
TC1
TC2
8-bit Timer/Counter
TC3
TC4
Serial Interface
SIO
HSO
Commond Register
Commond Decoder
6-bit Comparator
P2
P0
P1
P3
P5
P4
P20~P22
P00~P07
P10~P17
P30~P37
P50~P55
P40~P47
I/O Port

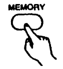
Preset memory



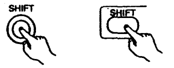


Preparations: Use the "Auto tuning" or "Manual tuning" operation to tune in the station to be preset in the memory.

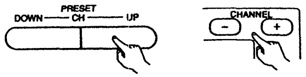
1 Press the MEMORY button.



2 Press the SHIFT button and select the desired memory block (A to E).



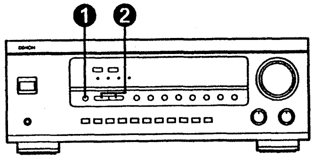
3 Press the PRESET UP or DOWN button to select the desired preset channel (1 to 8).

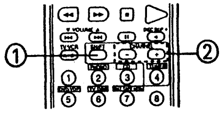


4 Press the MEMORY button again to store the station in the preset memory.

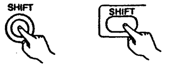
* To preset other channels, repeat steps 1 to 4.
A total of 40 broadcast stations can be preset—8 stations (channels 1 to 8) in each of blocks A to E.

Recalling preset stations

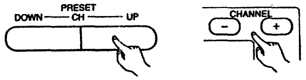




1 Watching the display, press the SHIFT button to select the preset memory block.

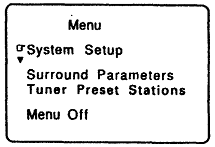


2 Watching the display, press the PRESET UP or DOWN button to select the desired preset channel.



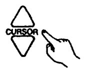
Recalling preset stations with the on screen display

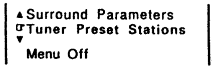
1 Press the ENTER button and call out the "Menu" screen from the on screen display.



Menu
☞System Setup
Surround Parameters
Tuner Preset Stations
Menu Off

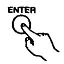
2 Use the CURSOR △ and ▽ buttons to set the ☞ mark to "Tuner Preset Stations".

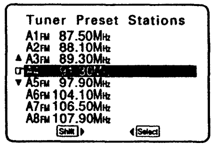




▲Surround Parameters
☞Tuner Preset Stations
Menu Off

3 Press the ENTER button.
- The frequencies of the preset stations are displayed.

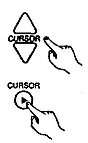




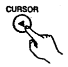
Tuner Preset Stations
A1FM 87.50MHz
A2FM 88.10MHz
▲A3FM 89.30MHz
☞A4FM 9[illegible].30MHz
▼A5FM 97.90MHz
A6FM 104.10MHz
A7FM 106.50MHz
A8FM 107.90MHz
Shift▶ ◀Select

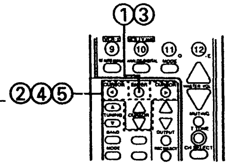
4 Use the CURSOR △ and ▽ buttons to highlight the station to be tuned in.

If the desired station is not displayed, press the CURSOR ▶ button and display the next page.



5 Press the CURSOR ◀ button. The selected station is tuned in.



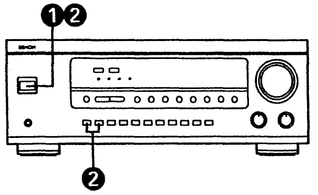


11 LAST FUNCTION MEMORY

- This unit is equipped with a last function memory which stores the input and output setting conditions as they were immediately before the power is switched off.
- The unit is also equipped with a back-up memory. This function provides approximately one week of memory storage when the main unit's power switch is off and with the power cord disconnected.

12 INITIALIZATION OF THE MICROPROCESSOR

When the indication of the display is not normal or when the operation of the unit does not shows the reasonable result, the initialization of the microprocessor is required by the following procedure.



1 Switch off the unit using the main unit's power switch.

2 Hold the following STEREO button and DOLBY SURROUND button, and turn the main unit's power switch on.

3 Check that the entire display is flashing with an interval of about 1 second, and release your fingers from the 2 buttons and the microprocessor will be initialized.

13 TROUBLESHOOTING

If a problem should arise, first check the following:

1. **Are the connections correct?**
2. **Have you operated the receiver according to the Operating Instructions?**
3. **Are the speakers, turntable, and other components operating properly?**

If this unit is not operating properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. Disconnect the power immediately and contact your store of purchase.

	Symptom	Cause	Measures	Page
Common problems arising when listening to the CD, records, tapes, and FM broadcasts, etc.	DISPLAY not lit and sound not produced when power switch set to on.	● Power cord not plugged in securely.	● Check the insertion of the power cord plug. ● Turn the power on with the remote control unit after turning the POWER switch on.	6 24
	DISPLAY lit but sound not produced.	● Speaker cords not securely connected. ● Improper position of the audio function button. ● Volume control set to minimum. ● MUTING is on. ● Digital signals not input Digital input selected.	● Connect securely. ● Set to a suitable position. ● Turn volume up to suitable level. ● Switch off MUTING. ● Input digital signals or select input jacks to which digital signals are being input.	9, 10 25, 26 25, 26 27 26
	DISPLAY is not displayed and the "STANDBY" LED flashes at a high rate.	● Speaker terminals are short-circuited. ● Block the ventilation holes of the set. ● The unit is operating at continuous high power conditions and/or inadequate ventilation.	● Switch power off, connect speakers properly, then switch power back on. ● Turn off the set's power, then ventilate it well to cool it down. Once the set is cooled down, turn the power back on. ● Turn off the set's power, then ventilate it well to cool it down. Once the set is cooled down, turn the power back on.	9, 10 5 5
	Sound produced only from one channel.	● Incomplete connection of speaker cords. ● Incomplete connection of input/output cords.	● Connect securely. ● Connect securely.	9, 10 6~8
	Positions of instruments reversed during stereo playback.	● Reverse connections of left and right speakers or left and right input/output cords.	● Check left and right connections.	6~10
	The on screen display is not displayed.	● "On screen display" is set to off on the system setup menu screen.	● Set "on screen display" on the system setup menu screen to on.	17
When playing records	Humming noise produced when record is playing.	● Ground wire of turntable not connected properly. ● Incomplete PHONO jack connection. ● TV or radio transmission antenna nearby.	● Connect securely. ● Connect securely. ● Contact your store of purchase.	6 6 —
	Howling noise produced when volume is high.	● Turntable and speaker systems too close together. ● Floor is unstable and vibrates easily.	● Separate as much as possible. ● Use cushions to absorb speaker vibrations transmitted by floor. If turntable is not equipped with insulators, use audio insulators (commonly available).	— —
	Sound is distorted.	● Stylus pressure too weak. ● Dust or dirt on stylus. ● Cartridge defective.	● Apply proper stylus pressure. ● Check stylus. ● Replace cartridge.	— — —
	Volume is weak.	● MC cartridge being used.	● Replace with MM cartridge or use a head amplifier or step-up transformer.	6
Remote control unit	This unit does not operate properly when remote control unit is used.	● Batteries dead. ● Remote control unit too far from this unit. ● Obstacle between this unit and remote control unit. ● Different button is being pressed. ● ⊕ and ⊖ ends of battery inserted in reverse.	● Replace with new batteries. ● Move closer. ● Remove obstacle. ● Press the proper button. ● Insert batteries properly.	19 19 19 — 19
	ERROR/OVERLOAD LED lights. ● During analog input playback. ● During digital input playback.	— —	● See page 25. ● See page 26.	— —

14 SPECIFICATIONS

● **Audio section**			
(Power amplifier)			
Rated output:	Front:	85 W + 85 W	(8 Ω / ohms, 20 Hz ~ 20 kHz with 0.05% T.H.D.)
	Center:	85 W	(8 Ω / ohms, 20 Hz ~ 20 kHz with 0.05% T.H.D.)
	Surround:	85 W + 85 W	(8 Ω / ohms, 20 Hz ~ 20 kHz with 0.05% T.H.D.)
Dynamic power:	105 W × 2 ch (8 Ω / ohms)		
	170 W × 2 ch (4 Ω / ohms)		
	215 W × 2 ch (2 Ω / ohms)		
Output terminals:	Front / Center:	A or B or Bi-wiring	8 to 16 Ω / ohms
		A + B	16 Ω / ohms
	Surround:	8 to 16 Ω / ohms	
(Analog)			
Input sensitivity / input impedance:	200 mV/47 kΩ / kohms		
Frequency response:	10 Hz ~ 150 kHz: +1, −3 dB		
S / N:	96 dB		
Distortion:	0.05% (20 Hz ~ 20 kHz)		
Rated output	1.2 V		
Maximum headphones output:	27 mW (8 Ω/ohms)		
Phono equalizer (PHONO input —REC OUT)			
Input sensitivity:	2.5 mV		
RIAA deviation:	±1 dB (20 Hz to 20 kHz)		
S / N:	74 dB (A weighting, with 5 mV input)		
Rated output / Maximum output	150 mV / 8 V		
Distortion factor:	0.03% (1 kHz, 3V)		
(Digital)			
D / A output:	Rated output – 2 V (at 0 dB playback)		
	Total harmonic distortion – 0.01% (1 kHz, at 0 dB)		
	S/N ratio – 102 dB		
	Dynamic range – 93 dB		
Digital input:	Format – Digital audio interface		
● **Video section**			
(Standard video jacks)			
Input / output level and impedance:	1 Vp-p, 75 Ω / ohms		
Frequency response:	5 Hz ~ 10 MHz +1, −3 dB		
(S-video jacks)			
Input / output level and impedance:	Y (brightness) signal – 1 Vp-p, 75 Ω/ohms		
	C (color) signal – 0.286 Vp-p, 75 Ω/ohms		
Frequency response:	Y (brightness) signal – 5 Hz ~ 10 MHz +1, −3 dB		
	C (color) signal – 10 Hz ~ 10 MHz +1, −3 dB		
● **Tuner section**			
	[FM] (note: µV at 75 Ω/ohms, 0 dBf = 1×10^{-15} W)		**[AM]**
Receiving Range:	87.5 MHz ~ 107.9 MHz		520 kHz ~ 1710 kHz
Usable Sensitivity:	1.0 µV (11.2 dBf)		18 µV
50 dB Quieting Sensitivity:	MONO	1.6 µV (15.3 dBf)	
	STEREO	23 µV (38.5 dBf)	
S / N: (IHF-A):	MONO	80 dB	50 dB
	STEREO	75 dB	
Total Harmonic Distortion (at 1 kHz):	MONO	0.15%	
	STEREO	0.3%	
● **General**			
Power supply:	AC 120 V, 60 Hz		
Power consumption:	5.6 A		
Maximum external dimensions:	434 (W) × 161 (H) × 416 (D) mm (17-3/32" × 6-11/32" × 16-3/8")		
Weight:	14.8 kg (32 lbs 10 oz)		
● **Remote control unit (RC-825)**			
Batteries:	R6P/AA Type (two batteries)		
External dimensions:	70 (W) × 215 (H) × 19 (D) mm (2-3/4" × 8-15/32" × 3/4")		
Weight:	180 g (Approx. 6 oz) (including batteries)		

* For purposes of improvement, specifications and design are subject to change without notice.

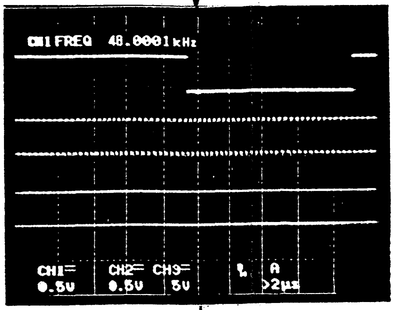
lz)

IC303 15 pin (OPT)
IC303 2 pin (COAX)
IC457 61 pin

Vertical: 5V/div
Horizontal: 1.0 mS/div

When the analog signal is fed.

fig.2-3



A: IC515 14 pin
B: IC515 15 pin
C: IC515 16 pin

Vertical: 5V/div
Horizontal: 0.5 mS/div

fig.4

A: IC504 ~ 506 13 pin
B: IC504 ~ 506 11 pin
C: IC504 ~ 506 14 pin
Vertical: 5V/div
Horizontal: 0.5 mS/div

Confirm the normal communication waveforms (Fig.5) at 89Pin, 87Pin and 3Pin of IC457 which is fed from the microcomputer with serial data communication control.

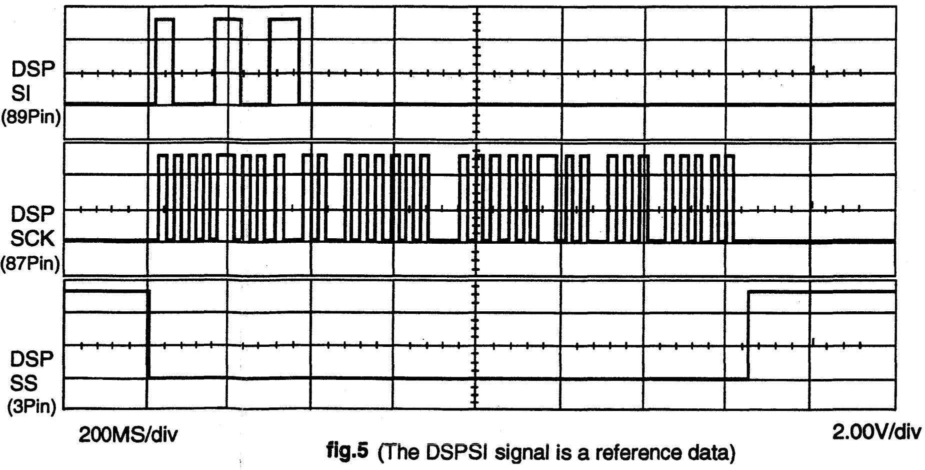
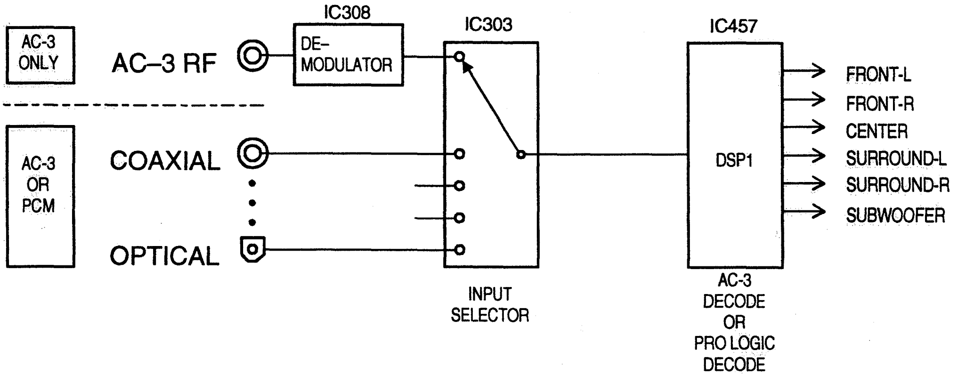


fig.5 (The DSPSI signal is a reference data)

DSP (IC457) performs AC-3 decoding process, DOLBY PRO LOGIC process and PCM digital process and PCM digital process by shifting. Decoded signal to each channel after passed through DSP1 (IC457) is D/A converted and delivered to volume control.

Block Diagram of AC-3, PCM Input Section (1U-2998)


IC308
IC303
IC457
AC-3 ONLY
AC–3 RF
DE-MODULATOR
FRONT-L
FRONT-R
CENTER
AC-3 OR PCM
COAXIAL
DSP1
SURROUND-L
SURROUND-R
SUBWOOFER
OPTICAL
INPUT SELECTOR
AC-3 DECODE OR PRO LOGIC DECODE

CONTROL ADVISABILITY OF EACH MODE

	FRONT L LEV.	FRONT R LEV	CENTER LEVEL	SURROUND L LEV	SURROUND R LEV	S. WOOFER LEVEL	INPUT ATTENUATOR	ROOM SIZE	EFFECT LEVEL	DELAY TIME	CINEMA EQ	D. COMP	DIAL, NORM.	TEST TONE
STEREO	O	O	X	X	X	O✱3	O✱4	X	X	X	X	O✱5	O✱5	O✱6
6CH EXT, IN	O	O	O	O	O	O	—	—	—	—	—	—	—	
5CH STEREO	O	O	O✱1	O✱2	O✱2	O✱3	O✱4	X	X	X	X	X	X	
DOLBY AC-3 or DOLBY PROLOGIC	O	O	O✱1	O✱2	O✱2	O✱3	O✱4	X	X	X	O	O✱5	O✱5	
MONO MOVIE	O	O	O✱1	O✱2	O✱2	O✱3	O✱4	O	O	X	X	O✱5	O✱5	
ROCK ARENA	O	O	O✱1	O✱2	O✱2	O✱3	O✱4	O	O	X	X	O✱5	O✱5	
JAZZ CLUB	O	O	O✱1	O✱2	O✱2	O✱3	O✱4	O	O	X	X	O✱5	O✱5	
VIDEO GAME	O	O	O✱1	O✱2	O✱2	O✱3	O✱4	O	O	X	X	O✱5	O✱5	
MATRIX	O	O	O✱1	O✱2	O✱2	O✱3	O✱4	X	X	O	X	O✱5	O✱5	

O : Feasible to control X : Infeasible to control

O✱1 : According to the contents of set up menu, when no center speaker is provided, with no controlling and sets - ∞ data to center electronic volume.

O✱2 : According to the contents of set up menu, when no rear speaker is provided, with no controlling and sets - ∞ data to rear electronic volume.

O✱3 : According to the contents of set up menu, when no woofer is provided, with no controlling and sets - ∞ data to woofer electronic volume.

O✱4 : Feasible to control only at analog input. Note that, this function corresponds to each input channel.

O✱5 : Feasible to control only at AC-3 input.

O✱6 : Feasible to control TEST TONE in all modes of set up menu.

Additional note : Each mode's FRONT/CENTER/SURROUND/S. WOOFER DELAY should be set according to the setting contents of delay time for set up menu.

Pin No.	Port Name	Symbol	I/O	Type	Op	Det	Res	Ini	Function
56	P86	POWER	O	P	Id	—	L	H	Power supply relay control output. (H: ON)
57	P87	AC-3 MUTE	O	P	Id	—	L	H	Digital mute control terminal (L: AC-3).
58	P90	OVL	I	—	—	—	L	—	Over load detecting input. (H: Over load)
59	P91	AC-3 DET.	I	—	—	—	L	—	AC-3 decode data input terminal. (L: AC-3 decode)
60	P92	NC	I	P	Id	—	L	L	No connection.
61	P93	NC	I	P	Id	—	L	L	No connection.
62	P94	NC	I	P	Id	—	L	L	No connection.
63	P95	CSI	I	—	—	—	L	—	DIR control input terminal. (CS8412) (H: PCM)
64	P96	ERR	I	—	—	—	L	—	DIR control input terminal. (CS8412) (H: ERR)
65	P97	NC	I	P	Id	—	L	L	No connection.
66	VKK	VKK	I	—	—	—	—	—	Connect to ground.
67	P40/KEY0	S-MONITOR DET.	I	—	Eu	Lv	Z	—	Judgment whether S monitor is connected or not. (L: Connecting)
68	P41/KEY1	S-SIGNAL DET.	I	—	Eu	Lv	Z	—	S signal input control. (H: S signal input)
69	P42/KEY2	OSD SYNC DET.	I	—	Eu	Lv	Z	—	OSD sync switching signal. (H: External sync)
70	P43/KEY3	MVOL SELB	I	—	Eu	Lv	Z	H	Master volume setting signal. (Rotary encode)
71	P44/KEY4	MVOL SELA	I	—	Eu	Lv	Z	H	Master volume setting signal. (Rotary encode)
72	P45/KEY5	NC	O	—	—	Lv	Z	L	
73	P46/CIN5	MODE	I	—	Eu	Lv	Z	—	Connect to GND.
74	P47/CIN4	KEY5	I	—	Eu	Lv	Z	H	Key input 5.
75	P50/CIN3	KEY4	I	—	Eu	Lv	Z	H	Key input 4.
76	P51/CIN2	KEY3	I	—	Eu	Lv	Z	H	Key input 3.
77	P52/CIN1	KEY2	I	—	Eu	Lv	Z	H	Key input 2.
78	P53/CIN0	KEY1	I	—	Eu	Lv	Z	H	Key input 1.
79	P54	SUB SYNC 1	I	—	Eu	Lv	Z	H	SUB microcomputer sync input.
80	P55/PMW	SO/ZORAN	I	—	Eu	Lv	Z	H	DSP data input terminal. (ZR38600)

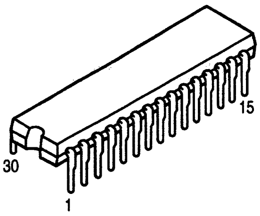
NOTE:

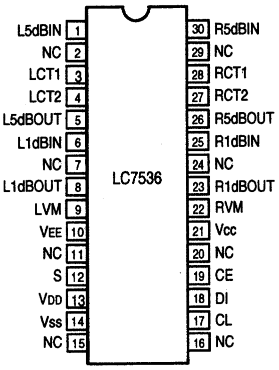
Pin No. : Terminal number of microcomputer.
Port Name : The name entered in the data sheet of microcomputer.
Symbol : Symbolized interface function.
I/O : Input or out of part.
"I" = Input port
"O" = Output port
Type : Composition of port in case of output port.
"C" = CMOS output
"N" = NMOS open drain output
"P" = PMOS open drain output
Op : Pull up/Pull down selection information.
"Iu" = Inner microcomputer pull up
"Id" = Inner microcomputer pull down
"Eu"= External microcomputer pull up
"Ed"= External microcomputer pull down
Det : Indicates judging state of input port. Level detection is "LV"; Edge detection is "Ed"; Detection by both shifting is "E&L"; Serial data detection is "S" (Serial data output is also "S").
Res : State at reset.
"H" = Outputs High Level at reset
"L" = Outputs Low Level at reset
"Z" = Becomes High impedance mode at reset
Ini : Initial output state.
Function : Function and logical level explanation of signals to be interface.

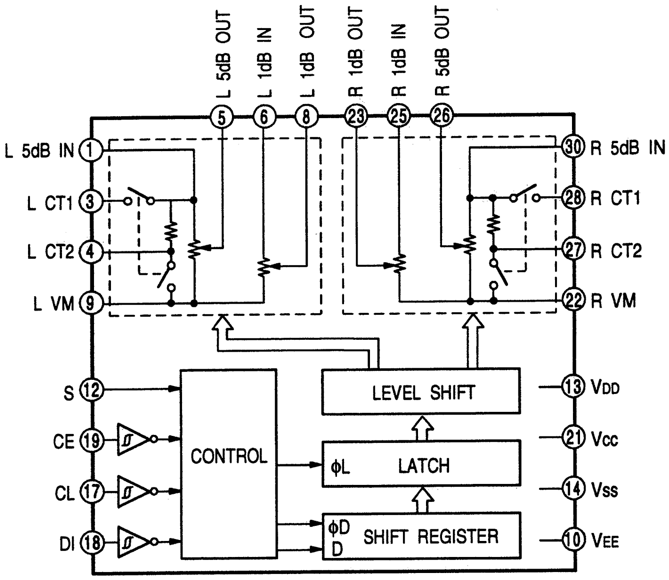
TMP87CM43N-*** Terminal Function

Pin No.	Port Name	Symbol	I/O	Type	Op	Det	Res	Ini	Function
1	P03	DSP POWER	O	C	—	—	L	L	DSP power supply control output (H: ON).
2	P04	DSP RES(ZORAN)	O	C	—	—	Z	H	DSP control terminal (ZR38600) (L: reset).
3	P05	DSP DATA	O	C	—	S	Z	H	DSP control terminal (ZR38600).
4	P06	ZORAN SS	O	C	—	—	Z	L	DSP control terminal (ZR38600).
5	P07	DSP CLK	O	C	—	S	Z	H	DSP control terminal (ZR38600).
6	P10/INT 0	DIN A	O	C	—	—	Z	L	Digital input control terminal (TC74HC151).
7	P11/INT 1	DIN B	O	C	—	—	Z	L	Digital input control terminal (TC74HC151).
8	P12/INT 2	DFS 2	O	C	—	—	Z	L	Digital filter emphasis control terminal.
9	P13/DV0	DFS 1	O	C	—	—	Z	H	Digital filter emphasis control terminal.
10	P14	FGAIN	O	C	—	—	Z	H	Gain selection control terminal.
11	P15/TC2	F0	O	—	—	—	Z	L	
12	P16	F1	O	—	—	—	Z	L	
13	P17	F2	O	—	—	—	Z	L	
14	P20/INT 5	SEL	O	—	—	—	Z	L	
15	TEST	TEST	I	—	GND	—	—	L	Connect with GND.
16	P21/XTIN		I	—	—	—	Z	L	Open, or connect with GND.
17	P22/XT0		I	—	—	—	Z	L	Open, or connect with GND.
18	RESET	RESET	I	—	Eu	Lv	L	—	Reset input.
19	XIN	XIN	I	—	—	—	—	—	Oscillator circuit (4 MHz).
20	XOUT	XOUT	O	—	—	—	—	—	Oscillator circuit (4 MHz).
21	VSS	VSS	I	—	GND	—	—	—	Connect with GND.
22	VAREF	VAREF	I	—	GND	—	—	—	Connect with GND.
23	P60		I	—	—	—	Z	L	Open, or connect with GND.
24	P61		I	—	—	—	Z	L	Open, or connect with GND.
25	P62		I	—	—	—	Z	L	Open, or connect with GND.
26	P63		I	—	—	—	Z	L	Open, or connect with GND.
27	P64		I	—	—	—	Z	L	Open, or connect with GND.
28	P65		I	—	—	—	Z	L	Open, or connect with GND.
29	P66		I	—	—	—	Z	L	Open, or connect with GND.
30	P67		I	—	—	—	Z	L	Open, or connect with GND.
31	P70/SCL	SCL	I	—	Eu	S	Z	—	MAIN-SUB microcomputer communication control terminal.
32	P71/SDA	SDA	I	—	Eu	S	Z	—	MAIN-SUB microcomputer communication control terminal.
33	P72	SUB SYNC1	O	N	Eu	—	Z	H	SUB microcomputer sync output.
34	P73		I	—	Eu	Lv	Z	—	Detect for stoping power supply (L: stoping power supply).
35	P74		I	—	—	—	Z	L	Open, or connect with GND.
36	P75		I	—	—	—	Z	L	Open, or connect with GND.
37	P76		I	—	—	—	Z	L	Open, or connect with GND.
38	P77		I	—	—	—	Z	L	Open, or connect with GND.
39	P00	DEMOD RES	O	C	—	—	Z	H	Demodulator reset control terminal (L: reset).
40	P01	DEMOD POWER	O	C	—	—	Z	L	Demodulator POWER ON/OFF control terminal (H: ON).
41	P02	DEMOD ON	O	C	—	—	Z	L	Demodulator oscillating control terminal (H: oscillating).
42	VDD	VDD	I	—	—	—	Z	—	Connect with +5V.

LC7536
(EV: IC101, 107, 108)



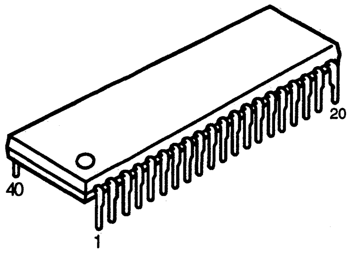

L5dBIN 1
NC 2
LCT1 3
LCT2 4
L5dBOUT 5
L1dBIN 6
NC 7
L1dBOUT 8
LVM 9
VEE 10
NC 11
S 12
VDD 13
Vss 14
NC 15
LC7536
30 R5dBIN
29 NC
28 RCT1
27 RCT2
26 R5dBOUT
25 R1dBIN
24 NC
23 R1dBOUT
22 RVM
21 Vcc
20 NC
19 CE
18 DI
17 CL
16 NC

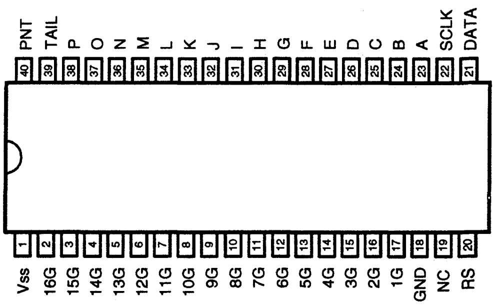

L 5dB OUT
L 1dB IN
L 1dB OUT
R 1dB OUT
R 1dB IN
R 5dB OUT
5
6
8
23
25
26
L 5dB IN 1
L CT1 3
L CT2 4
L VM 9
30 R 5dB IN
28 R CT1
27 R CT2
22 R VM
S 12
CE 19
CL 17
DI 18
CONTROL
LEVEL SHIFT
ϕL LATCH
ϕD
D
SHIFT REGISTER
13 VDD
21 Vcc
14 Vss
10 VEE

LC7536 Terminal Function

Pin No.	Symbol	I/O	Function
1	L 5dB IN	I	Input terminal for 5dB step attenuator, it should be driven with low impedance path.
2	NC	–	No connection.
3	L CT1		For loudness control, connect a capacitor between CT1 and 5dB IN with high frequency compensation, and also connect a capacitor between CT2 and Vm with low frequency compensation.
4	L CT2		
5	L 5dBOUT	O	Output terminal for 5dB step attenuator with approx. 1Mohm load impedance.
6	L 1dBIN	I	Input terminal for 1dB step attenuator, it should be driven with low impedance.
7	NC	–	No connection.
8	L 1dBOUT	O	Output terminal for 1dB step attenuator with approx. 47kohm ~ 1Mohm load impedance.
9	L VM		Common terminal for volume control.
10	VEE	I	Connect to power supply.
11	NC	–	No connection.
12	S		Selection terminal for address code during data format.
13	VDD	I	Connect to power supply (Pay attention to the rising time so that Vcc does rise up faster than VDD when the power turns).
14	Vss	I	Connect to power supply.
15	NC	–	No connection.
16	NC	–	No connection.
17	CL	I	Input terminal for controlling LC7536 serial data with 0 ~ 5V amplitude.
18	DI		
19	CE		
20	NC	–	No connection.
21	Vcc	I	Connect power supply (Pay attention to the rising time so that Vcc does not rise up faster than VDD when the power turns).
22	R VM		Common terminal for volume control.
23	R 1dBOUT	O	Output terminal for 1dB step attenuator with approx. 47kohm ~ 1Mohm load impedance.
24	NC	–	No connection.
25	R 1dBIN	I	Input terminal for 1dB step attenuator, it should be driven with low impedance.
26	R 5dBOUT	O	Output terminal for 5dB step attenuator with approx. 1Mohm load impedance.
27	R CT2		For loudness control, connect a capacitor between CT1 and 5dBIN with high frequency compensation, and also connect a capacitor between CT2 and Vm with low frequency compensation.
28	R CT1		
29	NC	–	No connection.
30	R SdBIN	I	Input terminal for 5dB step attenuator, it should be driven with low impedance path.

MSC1937-03RS
(VI: IC102)

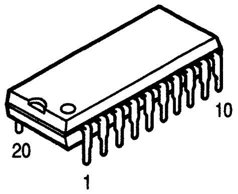


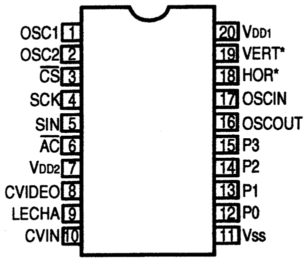

PNT
TAIL
P
O
N
M
L
K
J
I
H
G
F
E
D
C
B
A
SCLK
DATA
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Vss
16G
15G
14G
13G
12G
11G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
GND
NC
RS

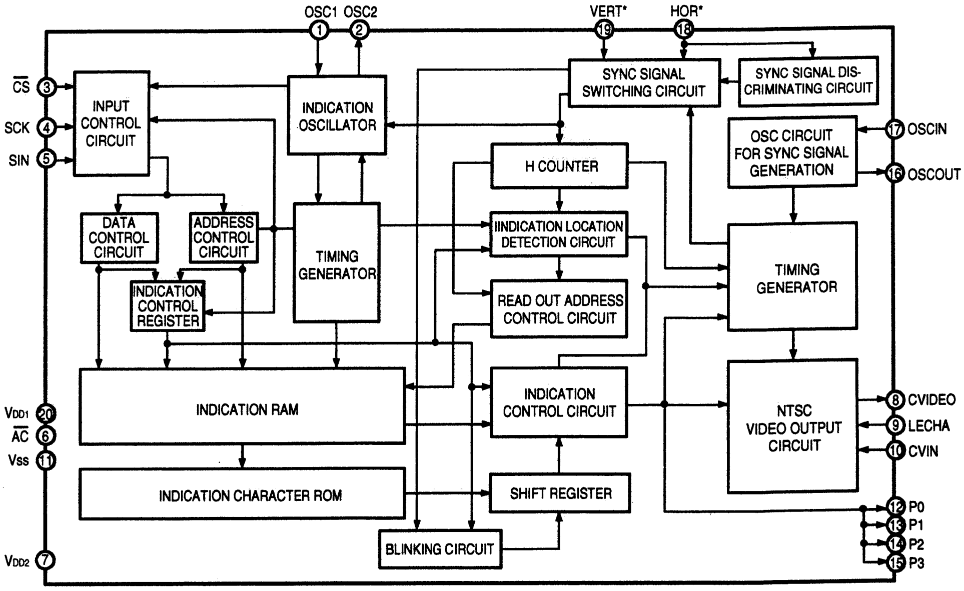
MSC1937-03RS Terminal Function

Pin No.	Symbol	I/O	Function
1	Vss	–	Power supply (+5V).
2	16G	O	Digit 16 output.
3	15G	O	Digit 15 output.
4	14G	O	Digit 14 output.
5	13G	O	Digit 13 output.
6	12G	O	Digit 12 output.
7	11G	O	Digit 11 output.
8	10G	O	Digit 10 output.
9	9G	O	Digit 9 output.
10	8G	O	Digit 8 output.
11	7G	O	Digit 7 output.
12	6G	O	Digit 6 output.
13	5G	O	Digit 5 output.
14	4G	O	Digit 4 output.
15	3G	O	Digit 3 output.
16	2G	O	Digit 2 output.
17	1G	O	Digit 1 output.
18	GND	–	Ground.
19	NC	–	No connection.
20	RS	I	POWER-ON-RESET. (H: RESET)
21	DATA	I	Data input.
22	SCLK	I	Shift clock input.
23	A	O	Seg,ent A output.
24	B	O	Segment B output.
25	C	O	Segment C output.
26	D	O	Segment D output.
27	E	O	Segment E output.
28	F	O	Segment F output.
29	G	O	Segment G output.
30	H	O	Segment H output.
31	I	O	Segment I output.
32	J	O	Segment J output.
33	K	O	Segment K output.
34	L	O	Segment L output.
35	M	O	Segment M output.
36	N	O	Segment N output.
37	O	O	Segment O output.
38	P	O	Segment P output.
39	TAIL	–	No connection.
40	PNT	O	Point output.

M35015-204SP
(VI: IC303)



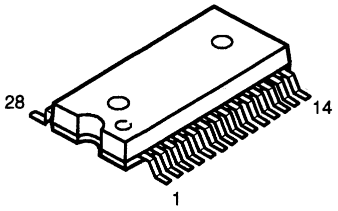

OSC1 1
OSC2 2
$\overline{CS}$ 3
SCK 4
SIN 5
$\overline{AC}$ 6
V_{DD2} 7
CVIDEO 8
LECHA 9
CVIN 10
20 V_{DD1}
19 VERT*
18 HOR*
17 OSCIN
16 OSCOUT
15 P3
14 P2
13 P1
12 P0
11 Vss

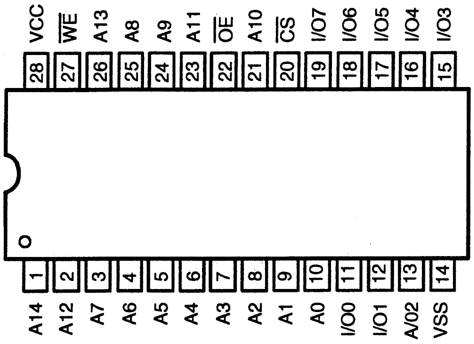

OSC1 OSC2
1 2
VERT* HOR*
19 18
$\overline{CS}$ 3
SCK 4
SIN 5
INPUT CONTROL CIRCUIT
INDICATION OSCILLATOR
SYNC SIGNAL SWITCHING CIRCUIT
SYNC SIGNAL DIS-CRIMINATING CIRCUIT
OSC CIRCUIT FOR SYNC SIGNAL GENERATION
17 OSCIN
16 OSCOUT
H COUNTER
DATA CONTROL CIRCUIT
ADDRESS CONTROL CIRCUIT
TIMING GENERATOR
INDICATION CONTROL REGISTER
IINDICATION LOCATION DETECTION CIRCUIT
READ OUT ADDRESS CONTROL CIRCUIT
TIMING GENERATOR
INDICATION RAM
INDICATION CONTROL CIRCUIT
NTSC VIDEO OUTPUT CIRCUIT
8 CVIDEO
9 LECHA
10 CVIN
V_{DD1} 20
$\overline{AC}$ 6
Vss 11
INDICATION CHARACTER ROM
SHIFT REGISTER
BLINKING CIRCUIT
V_{DD2} 7
12 P0
13 P1
14 P2
15 P3

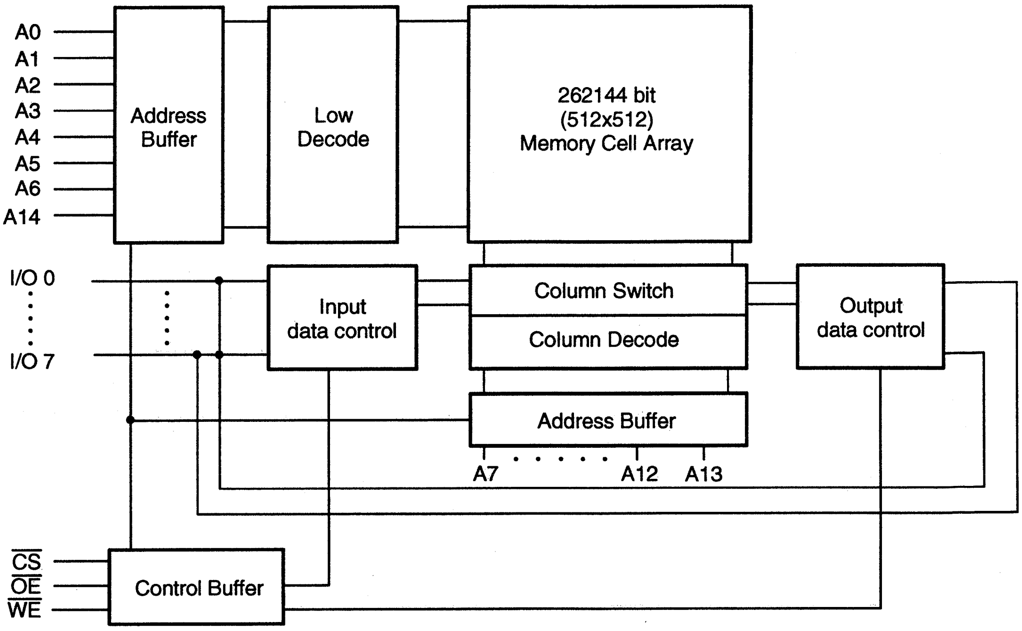
M35015-204SP Terminal Function

Pin No.	Symbol	Name	I/O	Function
1	OSC1	Osc. circuit ext.	I	External terminal for indication oscillator circuit. Standard OSC. freq. is approx. 7MHz.
2	OSC2	terminal.	O	With this OSC. freq., decides horizontal indicatin and character width.
3	$\overline{CS}$	Chip select input	I	Chip select terminal and turns to "L" when transfer serial data. Hysteresis input. Pull up resistor is built-in.
4	SCK	Serial clock input	I	Takes in serial data of SIN at SCK rise when CS terminal is in "L". Hysteresis input. Pull up rersist is built-in.
5	SIN	Serial data input	I	Serial input of register for indication control and data, and address for indication data memory. Hysteresis input. Pull up rersistor is built-in.
6	$\overline{AC}$	Auto-clear input	I	Resets internal circuit of IC at "L" mode. Hysteresi input. Pull up resistor is built-in.
7	V_{DD2}	Power supply	—	Power supply terminal of analog system. Connect to +5V.
8	CVIDEO	Combined video output	O	Output terminal of combined video signal. Outputs 2Vp-p combined signal. Character output, etc. Overlap CVIN signal and outputs at superimpose.
9	LECHA	Character level input	I	Input terminal deciding character output level in combined video signal. color of character is white.
10	CVIN	Combined video input	I	Input terminal of external combined video signal. Character output etc. overlap this external combined video signal.
11	Vss	Ground	—	Ground terminal. Connect to GND.
12	P0	Output port p0	O	General output or character background signal BL NK1* output is switchable. Polarity can be selected at ROM mask.
13	P1	Output port P1	O	General output or character background signal CO1* output is switchable. Polarity can be selected at ROM mask.
14	P2	Output port P2	O	General output or character background signal BLNK2* output is switchable. Polarity can be selected at ROM mask.
15	P3	Output port P3	O	General output or character background signal CO2* output is switchable. Polarity can be selected at ROM mask.
16	OSCOUT	Ext. terminal for sync sig. OSC. Circuit	O	Terminal for external use of sync signal OSC. circuit. Use the freq.: 14.32MHz at NTSC system, 17.73MHz at PAL. system, 14.30MHz at MPAL system.
17	OSCIN		I	
18	HOR*	Horizontal sync signal	I	Inputs horizontal sync signal. Hysteresis input.
19	VERT*	Vertical sync signal	—	Input vertical sync signal. Hysteresis input. Polarity can be selected at ROM mask.
20	V_{DD1}	Power supply	I	Power supply terminal of digital system. Connect to +5V.

BR62256F-70LL
(AU: IC306)



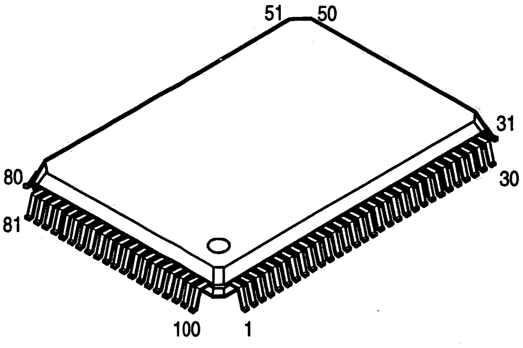

VCC
$\overline{\text{WE}}$
A13
A8
A9
A11
$\overline{\text{OE}}$
A10
$\overline{\text{CS}}$
I/O7
I/O6
I/O5
I/O4
I/O3
28
27
26
25
24
23
22
21
20
19
18
17
16
15
1
2
3
4
5
6
7
8
9
10
11
12
13
14
A14
A12
A7
A6
A5
A4
A3
A2
A1
A0
I/O0
I/O1
A/02
VSS

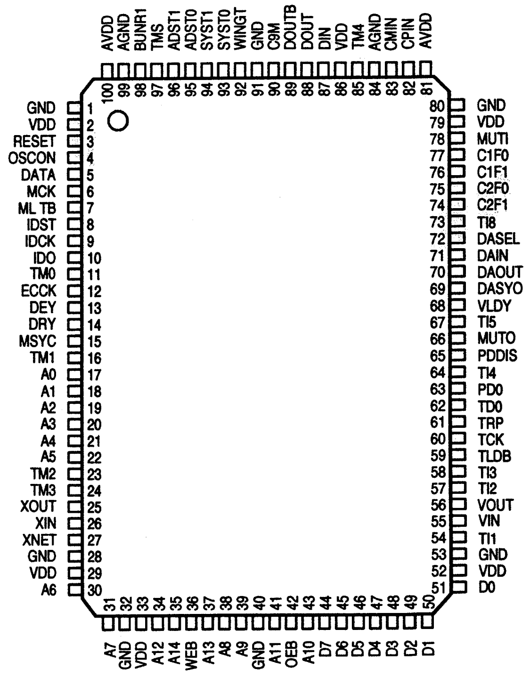

A0
A1
A2
A3
A4
A5
A6
A14
Address Buffer
Low Decode
262144 bit
(512x512)
Memory Cell Array
I/O 0
I/O 7
Input data control
Column Switch
Column Decode
Output data control
Address Buffer
A7
A12
A13
$\overline{\text{CS}}$
$\overline{\text{OE}}$
$\overline{\text{WE}}$
Control Buffer

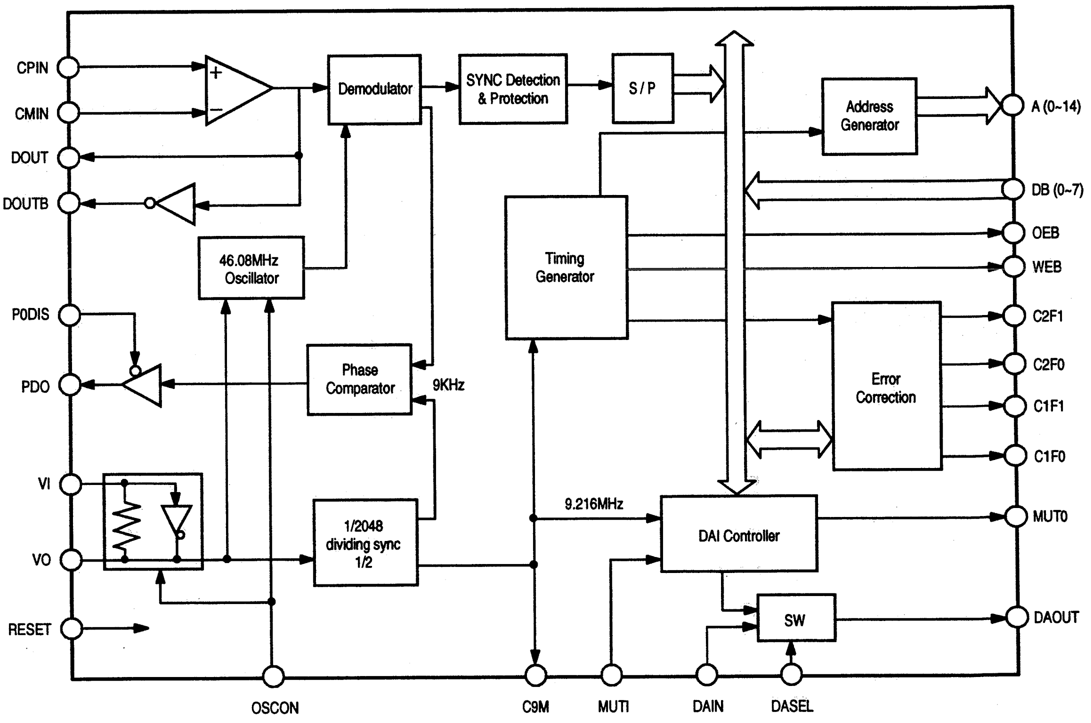
BR62256F-70LL Terminal Function

Pin No.	Symbol	I/O	Function
1~10	A0~A7, A12, A14	I	32K byte memory address input.
11~13	I/O0~I/O2	I/O	8 bit data input/output.
14	Vss	—	GND
15~19	I/O3~I/O7	I/O	8 bit data input/output.
20	$\overline{\text{CS}}$	I	Chip select control input.
21	A10	I	32K byte memory address input.
22	$\overline{\text{OE}}$	I	Output enable control input.
23~26	A8, A9, A11, A13	I	32K byte memory address input.
27	$\overline{\text{WE}}$	I	Write enable control input.
28	Vcc	—	+5V power supply.

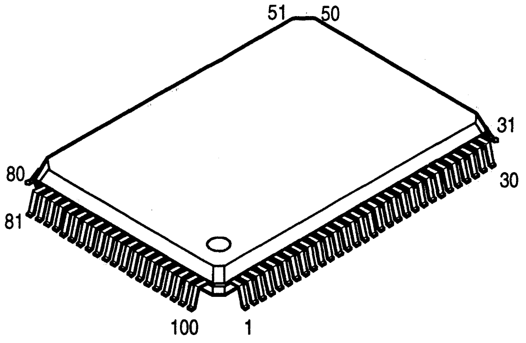
PM4007A
(AU: IC308)

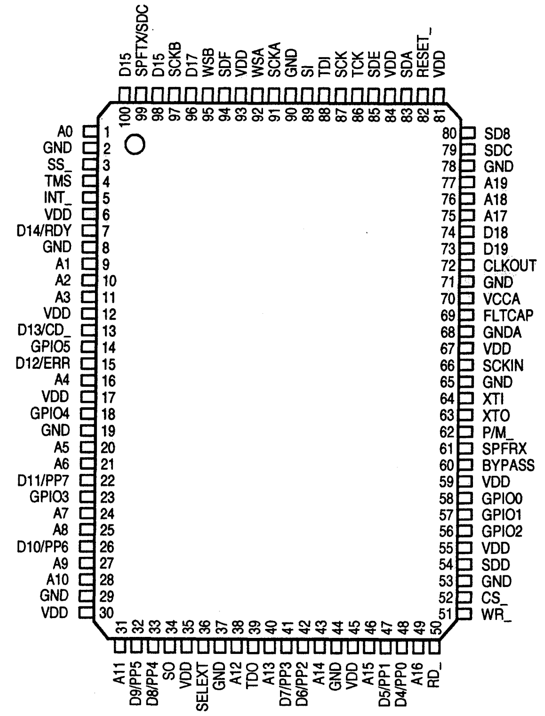

51
50
31
30
80
81
100
1


AVDD 100
AGND 99
BUNR1 98
TMS 97
ADST1 96
ADST0 95
SYST1 94
SYST0 93
WINGT 92
GND 91
C9M 90
DOUTB 89
DOUT 88
DIN 87
VDD 86
TM4 85
AGND 84
CMIN 83
CPIN 82
AVDD 81
GND 1
VDD 2
RESET 3
OSCON 4
DATA 5
MCK 6
ML TB 7
IDST 8
IDCK 9
IDO 10
TM0 11
ECCK 12
DEY 13
DRY 14
MSYC 15
TM1 16
A0 17
A1 18
A2 19
A3 20
A4 21
A5 22
TM2 23
TM3 24
XOUT 25
XIN 26
XNET 27
GND 28
VDD 29
A6 30
80 GND
79 VDD
78 MUTI
77 C1F0
76 C1F1
75 C2F0
74 C2F1
73 TI8
72 DASEL
71 DAIN
70 DAOUT
69 DASYO
68 VLDY
67 TI5
66 MUTO
65 PDDIS
64 TI4
63 PDO
62 TDO
61 TRP
60 TCK
59 TLDB
58 TI3
57 TI2
56 VOUT
55 VIN
54 TI1
53 GND
52 VDD
51 D0
31 A7
32 GND
33 VDD
34 A12
35 A14
36 WEB
37 A13
38 A8
39 A9
40 GND
41 A11
42 OEB
43 A10
44 D7
45 D6
46 D5
47 D4
48 D3
49 D2
50 D1

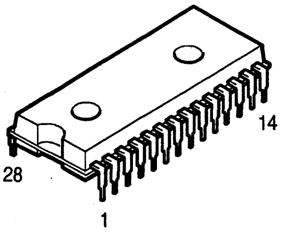

CPIN
CMIN
DOUT
DOUTB
PODIS
PDO
VI
VO
RESET
+
–
Demodulator
SYNC Detection & Protection
S / P
Address Generator
46.08MHz Oscillator
Timing Generator
Phase Comparator
9KHz
Error Correction
1/2048 dividing sync 1/2
9.216MHz
DAI Controller
SW
A (0~14)
DB (0~7)
OEB
WEB
C2F1
C2F0
C1F1
C1F0
MUTO
DAOUT
OSCON
C9M
MUTI
DAIN
DASEL

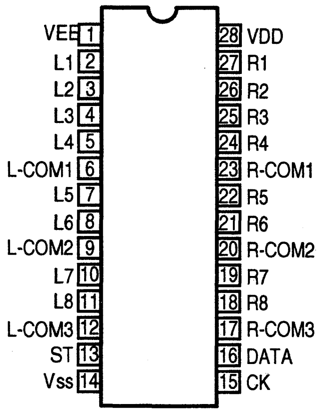
ZR38600 (AU: IC457)

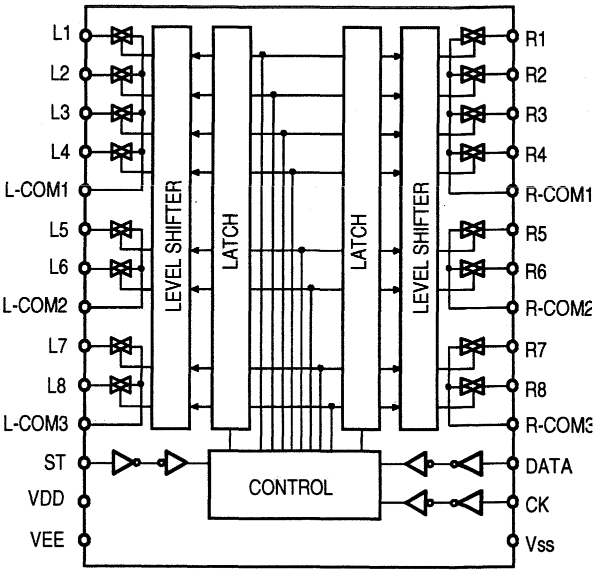

51
50
31
30
80
81
100
1


1 A0
2 GND
3 SS_
4 TMS
5 INT_
6 VDD
7 D14/RDY
8 GND
9 A1
10 A2
11 A3
12 VDD
13 D13/CD_
14 GPIO5
15 D12/ERR
16 A4
17 VDD
18 GPIO4
19 GND
20 A5
21 A6
22 D11/PP7
23 GPIO3
24 A7
25 A8
26 D10/PP6
27 A9
28 A10
29 GND
30 VDD
31 A11
32 D9/PP5
33 D8/PP4
34 SO
35 VDD
36 SELEXT
37 GND
38 A12
39 TDO
40 A13
41 D7/PP3
42 D6/PP2
43 A14
44 GND
45 VDD
46 A15
47 D5/PP1
48 D4/PP0
49 A16
50 RD_
51 WR_
52 CS_
53 GND
54 SDD
55 VDD
56 GPIO2
57 GPIO1
58 GPIO0
59 VDD
60 BYPASS
61 SPFRX
62 P/M_
63 XTO
64 XTI
65 GND
66 SCKIN
67 VDD
68 GNDA
69 FLTCAP
70 VCCA
71 GND
72 CLKOUT
73 D19
74 D18
75 A17
76 A18
77 A19
78 GND
79 SDC
80 SD8
81 VDD
82 RESET_
83 SDA
84 VDD
85 SDE
86 TCK
87 SCK
88 TDI
89 SI
90 GND
91 SCKA
92 WSA
93 VDD
94 SDF
95 WSB
96 D17
97 SCKB
98 D15
99 SPFTX/SDC
100 D15

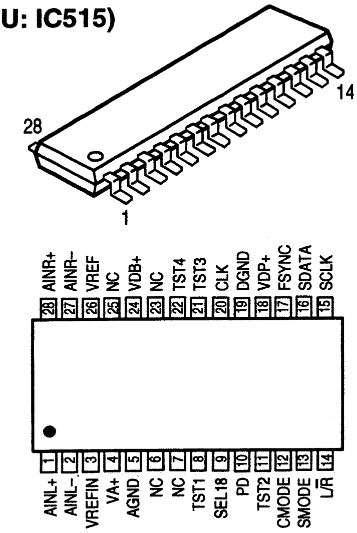
NJU7313AL (AU: IC704)

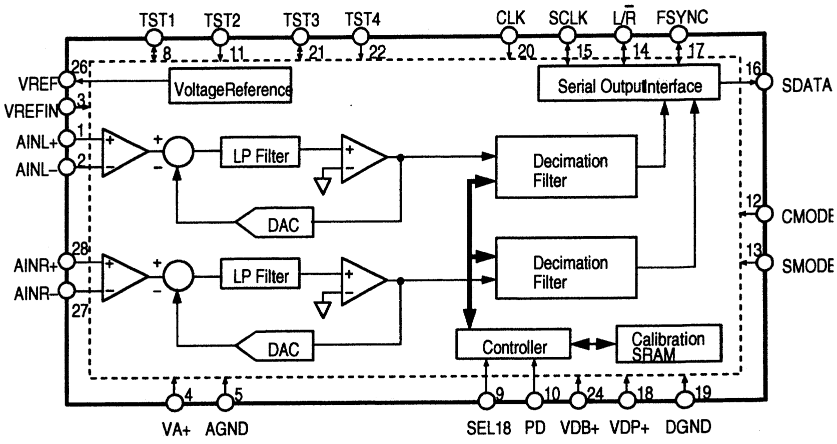



VEE 1
L1 2
L2 3
L3 4
L4 5
L-COM1 6
L5 7
L6 8
L-COM2 9
L7 10
L8 11
L-COM3 12
ST 13
Vss 14
28 VDD
27 R1
26 R2
25 R3
24 R4
23 R-COM1
22 R5
21 R6
20 R-COM2
19 R7
18 R8
17 R-COM3
16 DATA
15 CK


L1
L2
L3
L4
L-COM1
L5
L6
L-COM2
L7
L8
L-COM3
ST
VDD
VEE
LEVEL SHIFTER
LATCH
LATCH
LEVEL SHIFTER
CONTROL
R1
R2
R3
R4
R-COM1
R5
R6
R-COM2
R7
R8
R-COM3
DATA
CK
Vss

AK5340VS
(AU: IC515)


28
14
1
AINR+
AINR–
VREF
NC
VDB+
NC
TST4
TST3
CLK
DGND
VDP+
FSYNC
SDATA
SCLK
28 27 26 25 24 23 22 21 20 19 18 17 16 15
1 2 3 4 5 6 7 8 9 10 11 12 13 14
AINL+
AINL–
VREFIN
VA+
AGND
NC
NC
TST1
SEL18
PD
TST2
CMODE
SMODE
L/R

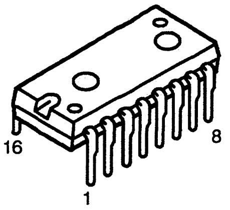

TST1
TST2
TST3
TST4
CLK
SCLK
L/R
FSYNC
8
11
21
22
20
15
14
17
VREF
26
VoltageReference
Serial OutputInterface
16
SDATA
VREFIN
3
AINL+
1
AINL–
2
LP Filter
Decimation Filter
DAC
12
CMODE
13
SMODE
AINR+
28
AINR–
27
LP Filter
Decimation Filter
DAC
Controller
Calibration SRAM
4
5
9
10
24
18
19
VA+
AGND
SEL18
PD
VDB+
VDP+
DGND

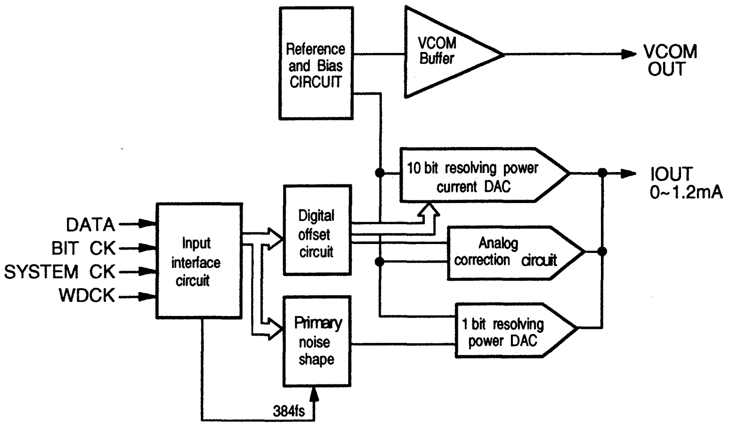
AK5340VS Terminal Function

Pin No.	Symbol	I/O	Function
1	AINL+	I	L ch analog non inverting input.
2	AINL–	I	L ch analog inverting input.
3	VREFIN	I	Reference voltage input.
4	VA+	—	Analog +5V power supply.
5	AGND	—	Analog ground.
6	NC		No connection.
7	NC		No connection.
8	TST1		Test terminal, open or connect to DGND.
9	SEL18	I	Output data length selecting terminal (built in pull down resistance) (L: 16 bit, H: 18 bit).
10	PD	I	Power down signal (H: Power down).
11	TST2		Test terminal, open or connect to DGND.
12	CMODE	I	Master clock selecting terminal. L: CLK = 256fs (12.288MHz @fs = 48kHz) H: CLK = 384fs (18.432MHz @fs = 48kHz)
13	SMODE	I	Interface clock selecting terminal (L: Slave mode, H: Master mode).
14	L/R	I/O	Input channel selecting terminal. Slave mode: fs clock input. Master mode: fs clock output.
15	SCLK	I/O	Serial data clock terminal. Slave mode: 32fs ~ 64fs clock input. Master mode: 64fs clock output.
16	SDATA	O	Serial data output terminal, data sequence output from MSB with 2's complement.
17	FSYNC	I/O	Frame sync clock terminal. Slave mode: Enable SDATA output at H. Master mode: 2fs clock output.
18	VDP+	—	Digital +5V power supply.
19	DGND	—	Digital ground.
20	CLK	I	Master clock input terminal. CMODE = "H" = 384fs CMODE = "L" = 256fs
21	TST3		Test terminal, open or connect to DGND.
22	TST4		Test terminal, open or connect to DGND.
23	NC		No connection.
24	VDB+	—	Digital +5V power supply.
25	NC		No connection.
26	VREF	O	Reference voltage output.
27	AINR–	I	R ch analog inverting input.
28	AINR+	I	R ch analog non inverting input.

Note: All other terminals except the above are no connection (NC). NC terminals are not bonded internally.

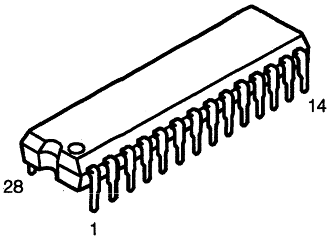
PCM69AP
(AU: IC504~506)

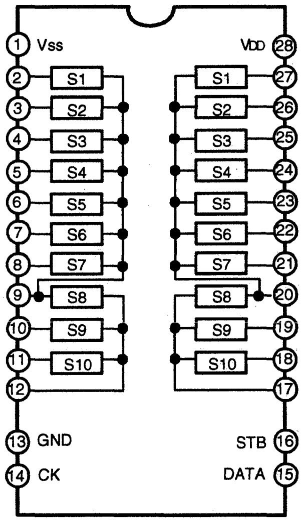


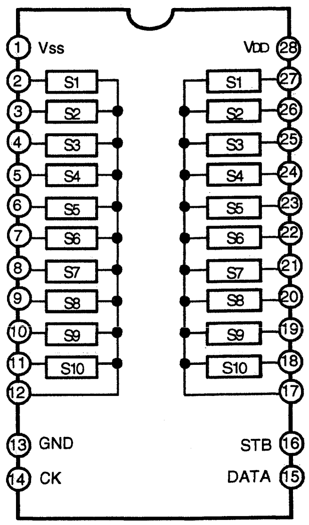

Reference and Bias CIRCUIT
VCOM Buffer
VCOM OUT
10 bit resolving power current DAC
IOUT 0~1.2mA
DATA
BIT CK
SYSTEM CK
WDCK
Input interface circuit
Digital offset circuit
Analog correction circuit
Primary noise shape
1 bit resolving power DAC
384fs

Pin No.	Function
1	+Vcc (Analog power supply)
2	Vcom. Lch
3	Lout. Lch
4	Servo. DC
5	REF. DC
6	Lout. Rch
7	Vcom. Rch
8	A-GND (Analog common)
9	D-GND (Digital common)
10	DATA Rch
11	BCK
12	SYS CLK
13	WDCK
14	DATA Lch
15	TP1
16	+VDD (Digital power supply)

TC9273N-007 (AU: IC602)
TC9273N-004 (AU: IC603)



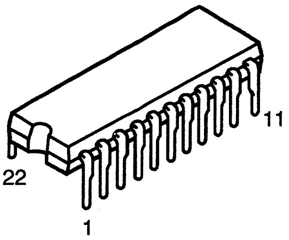

Vss
VDD
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
GND
CK
STB
DATA

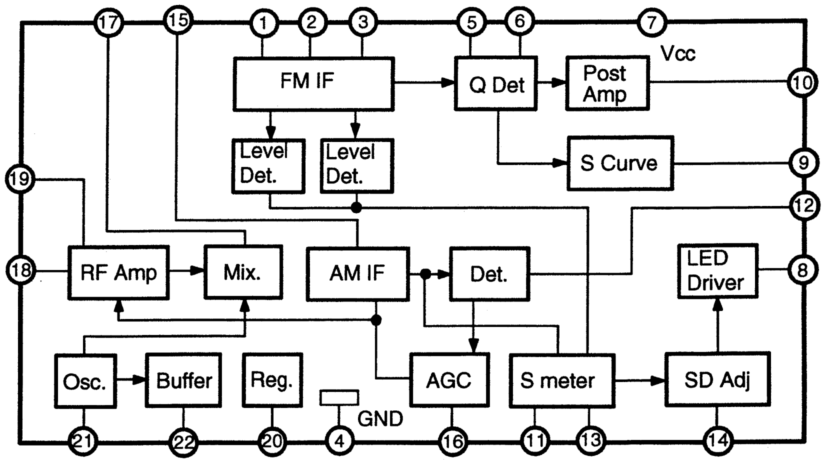

Vss
VDD
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
GND
CK
STB
DATA

TC9273N Terminal Function

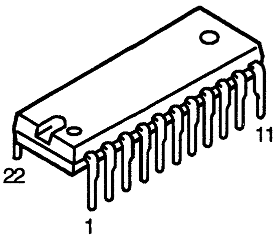
Pin No.	Symbol	Name	Function	Note
1	Vss	–Power Terminal	Dual Power Use: VDD = 8.0~17 V GND = 0V Vss = –8.0~17V Signal Power Use: VDD = 8.0~18V Vss = GND = 0V	—
13	GND	Digital Ground		
28	VDD	+Power Terminal		
2~12 17~27	S1~11	I/O Terminal	Input terminal of analog switch.	—
14	CK	Clock Input	Clock input for data transfer.	Low level Border Input Terminal
15	DATA	Data Input	Serial input for switch setting.	
16	STB	Strobe Input	Strobe input for data writing..	

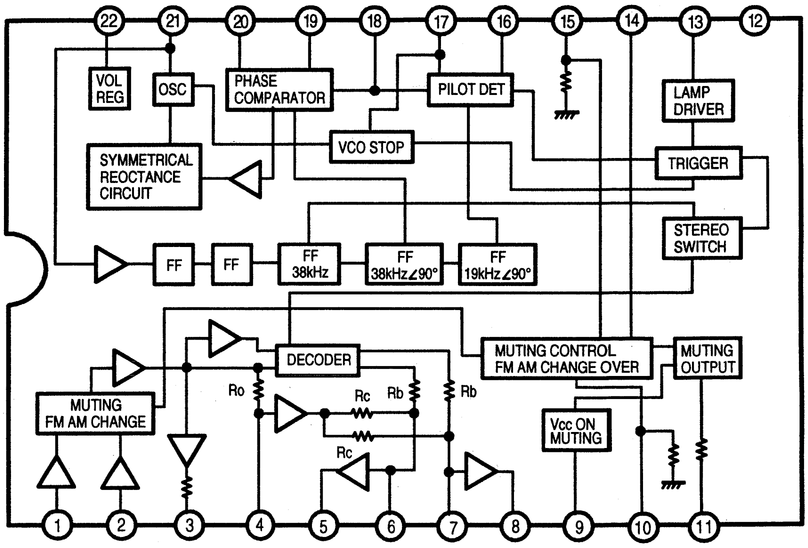
LA1265 (S)
(TU: IC502)



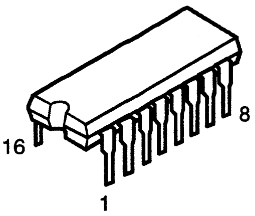

17
15
1
2
3
5
6
7
Vcc
FM IF
Q Det
Post Amp
10
Level Det.
Level Det.
S Curve
9
19
12
18
RF Amp
Mix.
AM IF
Det.
LED Driver
8
Osc.
Buffer
Reg.
AGC
S meter
SD Adj
GND
21
22
20
4
16
11
13
14

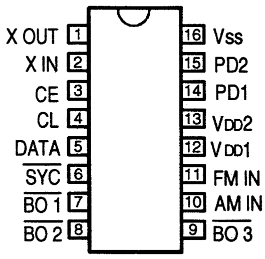
LA3401
(TU: IC503)

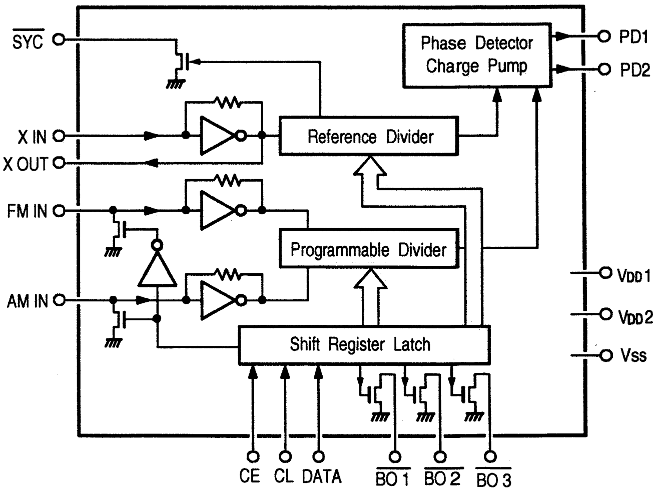



22
21
20
19
18
17
16
15
14
13
12
VOL REG
OSC
PHASE COMPARATOR
PILOT DET
LAMP DRIVER
VCO STOP
SYMMETRICAL REOCTANCE CIRCUIT
TRIGGER
STEREO SWITCH
FF
FF
FF 38kHz
FF 38kHz∠90°
FF 19kHz∠90°
DECODER
MUTING CONTROL FM AM CHANGE OVER
MUTING OUTPUT
MUTING FM AM CHANGE
Ro
Rc
Rb
Rb
Rc
Vcc ON MUTING
1
2
3
4
5
6
7
8
9
10
11

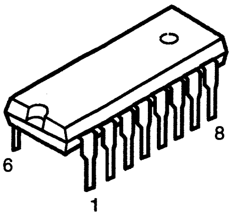
LM7001 (TU: IC505)

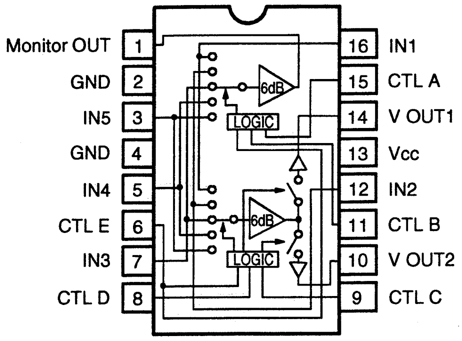



X OUT 1
X IN 2
CE 3
CL 4
DATA 5
SYC 6
BO 1 7
BO 2 8
16 Vss
15 PD2
14 PD1
13 VDD2
12 VDD1
11 FM IN
10 AM IN
9 BO 3


SYC
X IN
X OUT
FM IN
AM IN
Phase Detector Charge Pump
PD1
PD2
Reference Divider
Programmable Divider
Shift Register Latch
VDD1
VDD2
Vss
CE
CL
DATA
BO 1
BO 2
BO 3

BA7625 (VI: IC302, 401)
BA7626 (VI: IC301)




Monitor OUT 1
GND 2
IN5 3
GND 4
IN4 5
CTL E 6
IN3 7
CTL D 8
16 IN1
15 CTL A
14 V OUT1
13 Vcc
12 IN2
11 CTL B
10 V OUT2
9 CTL C
6dB
LOGIC
6dB
LOGIC

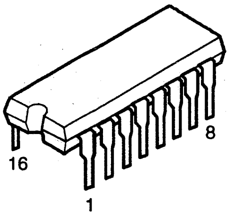
A	B	E	MONITOR OUT
L	L	*	IN 1
H	L	*	IN 2
L	H	*	IN 3
H	H	L	IN 4
H	H	H	IN 5

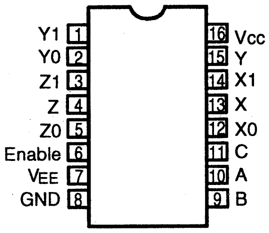
C	D	E	V OUT 1
L	L	*	—
H	L	*	IN 2
L	H	*	IN 3
H	H	L	IN 4
H	H	H	IN 5

C	D	E	V OUT 2
L	L	*	IN 1
H	L	*	—
L	H	*	IN 3
H	H	L	IN 4
H	H	H	IN 5

Note 1: * mark means that feasible for either H or L.
Note 2: Each input terminal is provided with sink chip clamp (BA7625).
Each input terminal takes 20kohm at the end (BA7626).

MC74HC4053N
(VI: IC304)

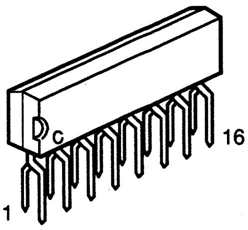


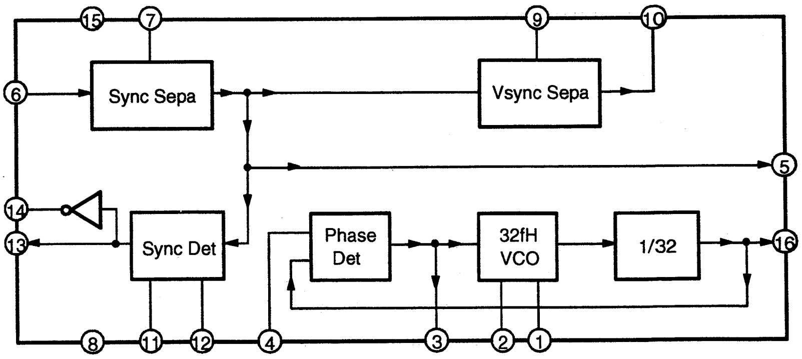

Y1 1
Y0 2
Z1 3
Z 4
Z0 5
Enable 6
VEE 7
GND 8
16 Vcc
15 Y
14 X1
13 X
12 X0
11 C
10 A
9 B

Control Inputs				
	Select			
Enable	C	B	A	ON Switches
L	L	L	L	Z0 Y0 X0
L	L	L	H	Z0 Y0 X1
L	L	H	L	Z0 Y1 X0
L	L	H	H	Z0 Y1 X1
L	H	L	L	Z1 Y0 X0
L	H	L	H	Z1 Y0 X1
L	H	H	L	Z1 Y1 X0
L	H	H	H	Z1 Y1 X1
H	X	X	X	None

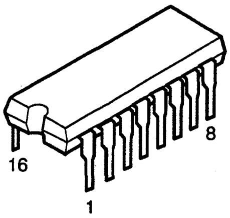
X = Don't Care

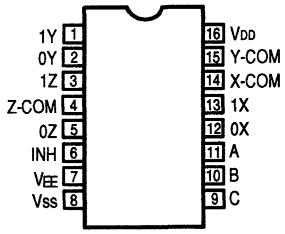
NJM2229S (VI: IC305)

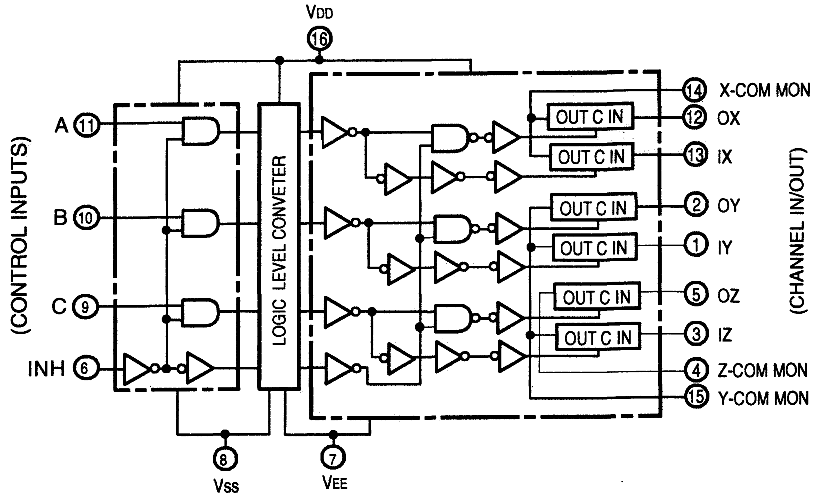



15
7
9
10
6
Sync Sepa
Vsync Sepa
5
14
13
Sync Det
Phase Det
32fH VCO
1/32
16
8
11
12
4
3
2
1

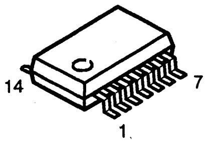
TC4053BP (VI: IC402)



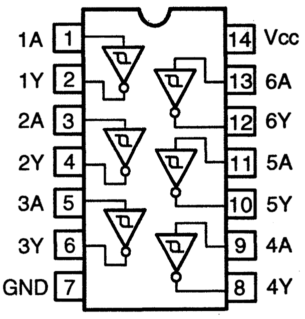

1Y 1
0Y 2
1Z 3
Z-COM 4
0Z 5
INH 6
VEE 7
Vss 8
16 VDD
15 Y-COM
14 X-COM
13 1X
12 0X
11 A
10 B
9 C


VDD
16
(CONTROL INPUTS)
A 11
B 10
C 9
INH 6
LOGIC LEVEL CONVETER
OUT C IN
OUT C IN
OUT C IN
OUT C IN
OUT C IN
OUT C IN
14 X-COM MON
12 0X
13 1X
2 0Y
1 1Y
5 0Z
3 1Z
4 Z-COM MON
15 Y-COM MON
(CHANNEL IN/OUT)
8
Vss
7
VEE

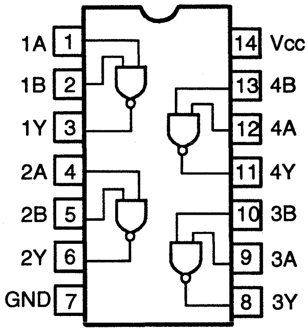
SN74HC14NS (AU: IC456)
SN74HCU04NS (AU: IC302)
TC74HC00AF (AU: IC454)



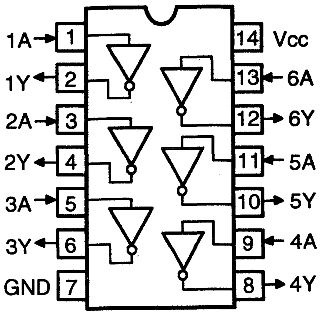
SN74HC14NS


1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 Vcc
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

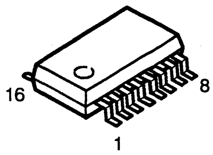
TC74HC00AF


1A 1
1B 2
1Y 3
2A 4
2B 5
2Y 6
GND 7
14 Vcc
13 4B
12 4A
11 4Y
10 3B
9 3A
8 3Y

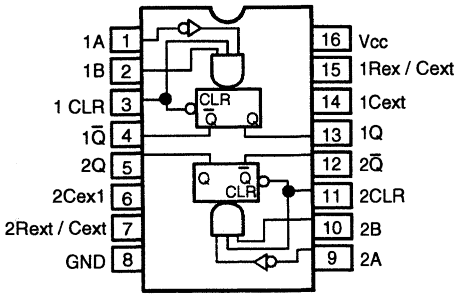
SN74HCU04NS


1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 Vcc
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

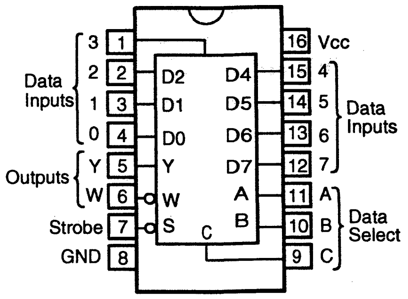
TC74HC123AF (AU: IC455)
SN74HC151NS (AU: IC303)



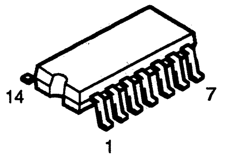
TC74HC123AF

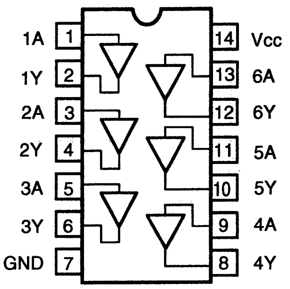

1A 1
1B 2
1 CLR 3
1Q̄ 4
2Q 5
2Cex1 6
2Rext / Cext 7
GND 8
16 Vcc
15 1Rex / Cext
14 1Cext
13 1Q
12 2Q̄
11 2CLR
10 2B
9 2A
CLR
Q̄
Q
Q
Q̄
CLR

SN74HC151NS

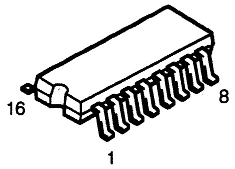

Data Inputs
3 1
2 2
1 3
0 4
Outputs
Y 5
W 6
Strobe 7
GND 8
16 Vcc
15 4
14 5
13 6
12 7
Data Inputs
11 A
10 B
9 C
Data Select
D2
D1
D0
Y
W
S
C
D4
D5
D6
D7
A
B

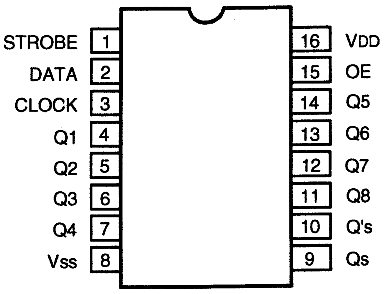
TC74HCT7007AF
(AU: IC458)



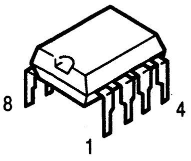

1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 Vcc
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

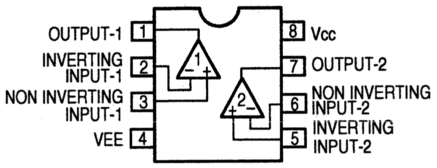
TC4094BF
(MA: IC121, 122)



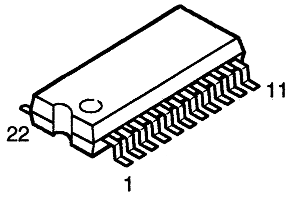

STROBE 1
DATA 2
CLOCK 3
Q1 4
Q2 5
Q3 6
Q4 7
Vss 8
16 VDD
15 OE
14 Q5
13 Q6
12 Q7
11 Q8
10 Q's
9 Qs

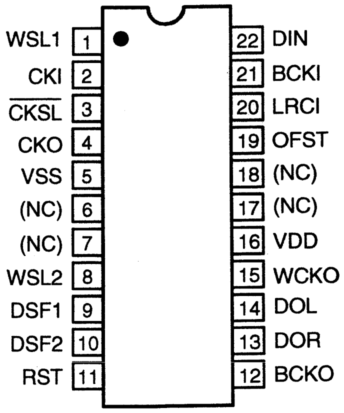
MC14577CP
(AU: IC304)
NJM2068DDC
(PA: IC701, 703, 901)
(VI: IC201)



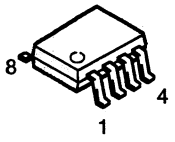

OUTPUT-1 1
INVERTING INPUT-1 2
NON INVERTING INPUT-1 3
VEE 4
8 Vcc
7 OUTPUT-2
6 NON INVERTING INPUT-2
5 INVERTING INPUT-2
1
2

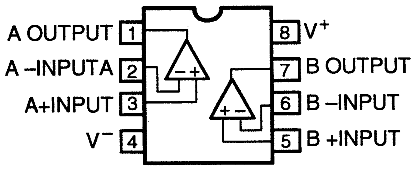
SM5841HS (AU: IC501~503)



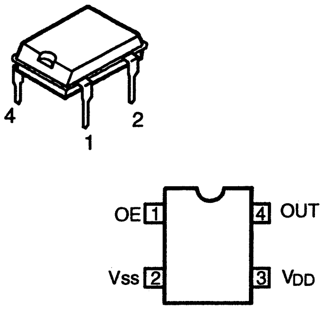

WSL1 1
CKI 2
$\overline{\text{CKSL}}$ 3
CKO 4
VSS 5
(NC) 6
(NC) 7
WSL2 8
DSF1 9
DSF2 10
RST 11
22 DIN
21 BCKI
20 LRCI
19 OFST
18 (NC)
17 (NC)
16 VDD
15 WCKO
14 DOL
13 DOR
12 BCKO

NJM2115M (AU: IC513, 514)
BA15218F (TU: IC504)
(AU: IC604~606, 701~703, 803~806)
(EV: IC103, 105, 106, 109, 110)
NJM2068MD(AU: IC507~512,601)
(EV: IC104)

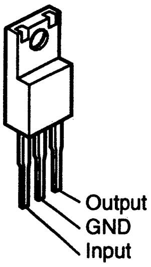



A OUTPUT 1
A −INPUTA 2
A+INPUT 3
V⁻ 4
8 V⁺
7 B OUTPUT
6 B −INPUT
5 B +INPUT

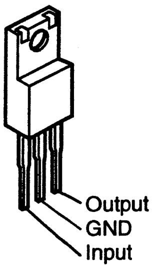
SG-531PH (12.288MHz)
(DS: IC515)


4
2
1
OE 1
Vss 2
4 OUT
3 VDD

NJM7805FA (S) (MA: IC116, 117)
NJM7806FA (S) (PA: IC704)
(VI: IC403, 404)
NJM7812FA (S) (TU: IC506)
NJM7815FA (MA: IC114)
BA033T (AU: IC460)

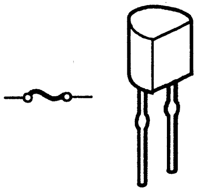

Output
GND
Input

NJM7905FA (MA: IC118)
NJM7915FA (MA: IC115)


Output
GND
Input

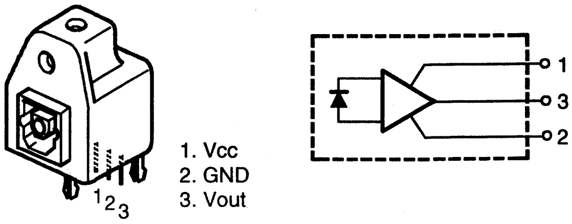
● IC PROTECTOR

ICP-N15 (TU: IC507) (PA: IC705)



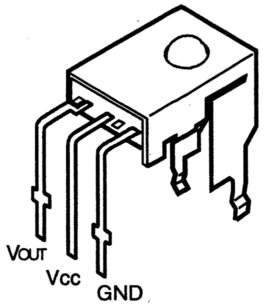
● OPTICAL

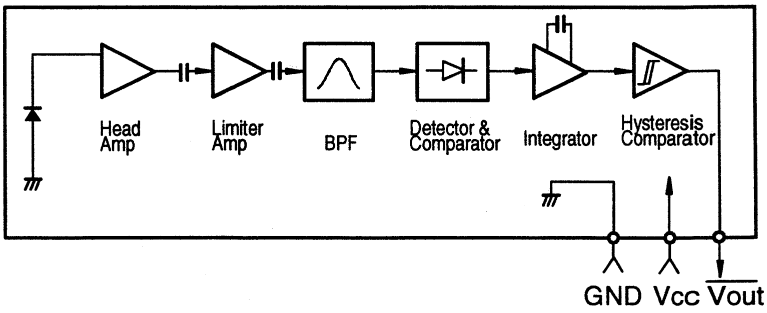
INPUT
GP1F32R
(AU: IC301)


1
2
3
1. Vcc
2. GND
3. Vout
1
3
2

● OTHER

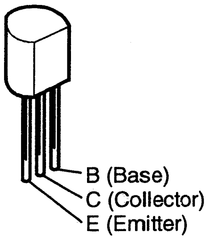
GP1U271X (Remote Control Sensor)
(VI: IC101)


VOUT
Vcc
GND

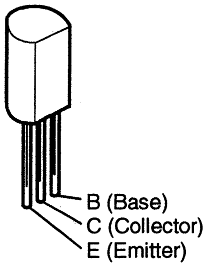

Head Amp
Limiter Amp
BPF
Detector & Comparator
Integrator
Hysteresis Comparator
GND
Vcc
Vout

● TRANSISTORS

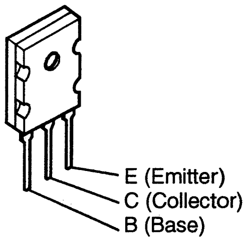
2PA1015GR
2PC1815BL
2SA970 (BL)
2SA988 (E/F)
2SC2878 (A/B)


B (Base)
C (Collector)
E (Emitter)

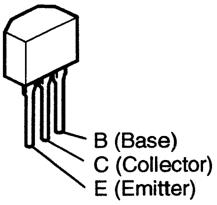
2SA1145 (O)/(Y)
2SB1041 (R)
2SC2705 (O)/(Y)
2SD1292 (R)


B (Base)
C (Collector)
E (Emitter)

2SA1491
2SC3855

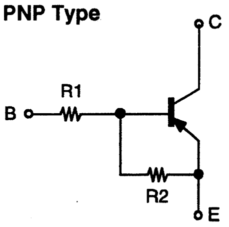

E (Emitter)
C (Collector)
B (Base)

DTA114ES
DTC143ES
DTC144ES
RN2202


B (Base)
C (Collector)
E (Emitter)

DTA114ES
RN2202

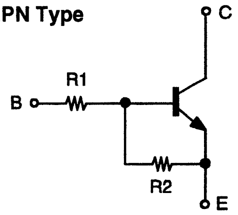
PNP Type



	R1	R2
DTA114ES	10kohm	10kohm
RN2202	10kohm	10kohm

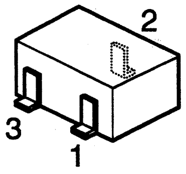
DTC143ES
DTC144ES

NPN Type



	R1	R2
DTC143ES	4.7kohm	4.7kohm
DTC144ES	47kohm	47kohm

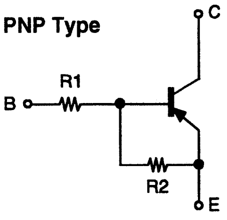
DTA114EK
DTA124EK
DTA143EK
DTA144EK
DTC114EK
DTC144EK
DTC323TK
RN2402



1: GND/Emitter
2: Out/Collector
3: In/Base

DTA114EK
DTA124U
DTA143EK
DTA144EK

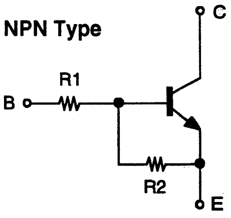
PNP Type



	R1	R2
DTA114EK	10kohm	10kohm
DTA124EK	22kohm	22kohm
DTA143EK	4.7kohm	4.7kohm
DTA144EK	47kohm	47kohm
RN2402	10kohm	10kohm

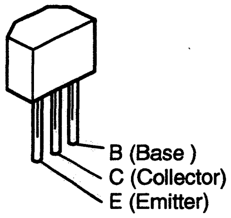
DTC114EK
DTC144EK
DTC323TK

NPN Type

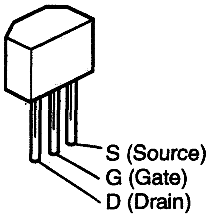


	R1	R2
DTC114EK	10kohm	10kohm
DTC144EK	47kohm	47kohm
DTC323TK	2.2kohm	-

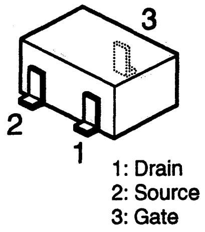
2SA933S (S)
2SC1740S (E)
2SC2058S (Q)


B (Base)
C (Collector)
E (Emitter)

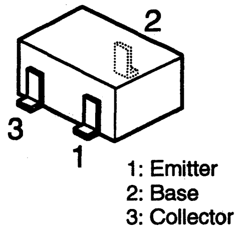
2SK184 (GR)/(BL)
2SK381 (B)/(C)


S (Source)
G (Gate)
D (Drain)

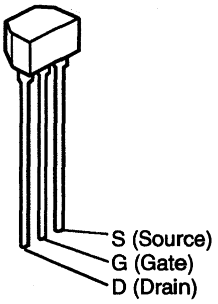
2SK209 (GR)


3
2
1
1: Drain
2: Source
3: Gate

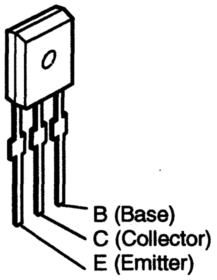
2SB709A
2SD601A


2
3
1
1: Emitter
2: Base
3: Collector

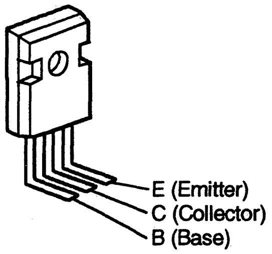
2SK365 (BL/GR)


S (Source)
G (Gate)
D (Drain)

2SB1328 (P/Q)
2SD2004 (P/Q)

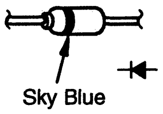

B (Base)
C (Collector)
E (Emitter)

2SA1633F31

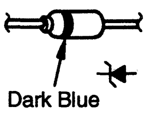

E (Emitter)
C (Collector)
B (Base)

● DIODES (included LED)

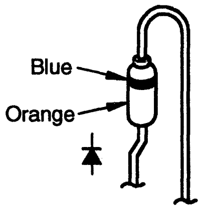
1SS270A
1S2076A



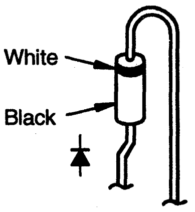
MTZJ3.3A MTZJ36A
MTZJ5.6A HZS5A-1
MTZJ7.5A HZS7C-1
MTZJ9.1A HZS12A-1



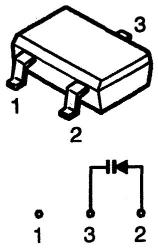
1SR35-200A


Blue
Orange

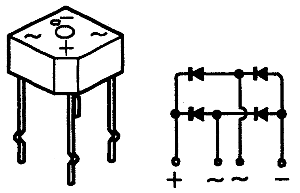
DSM1D2 (Type 3)


White
Black

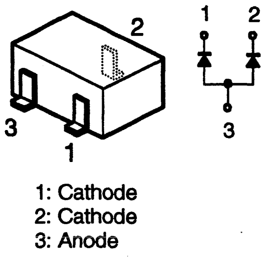
KV1851-TL
(AU: CD303)



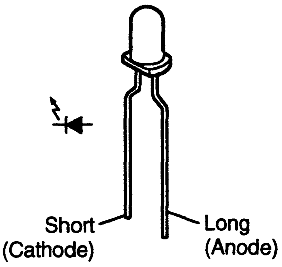
S4VB20
(MA: D117)



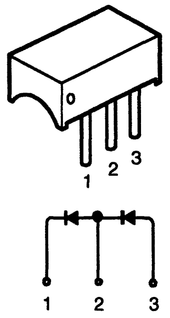
MA151A


2
3
1
1 2
3
1: Cathode
2: Cathode
3: Anode

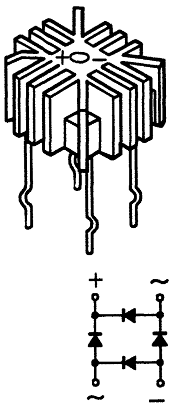
SEL1210S (Red)
(VI: LD101, 106)
SEL1410E (Green)
(VI: LD102, 105)


Short
(Cathode)
Long
(Anode)

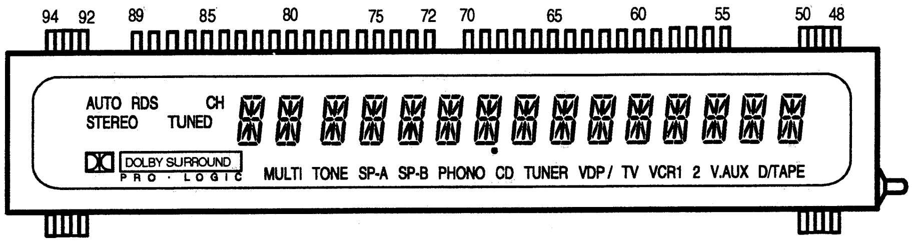
LD-603MG (Green)
(VI: LD103)
LD-603VR (Red)
(VI: LD104)

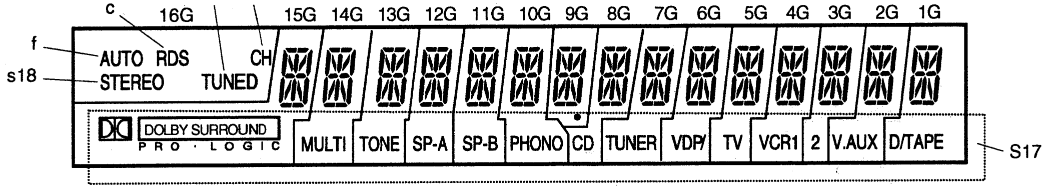


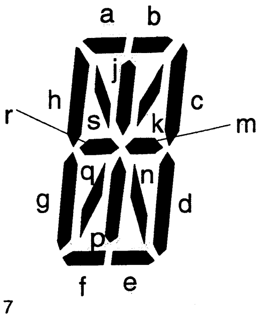
S10VB20F9
(TU: D601)



● FL DISPLAY FIP16FM7R (Part No.: 3934156001)(FL751)


94
92
89
85
80
75
72
70
65
60
55
50
48
AUTO RDS CH
STEREO TUNED
DOLBY SURROUND
PRO · LOGIC
MULTI TONE SP-A SP-B PHONO CD TUNER VDP/ TV VCR1 2 V.AUX D/TAPE
1 3
45 47


c
s17
h
16G
15G
14G
13G
12G
11G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
f
s18
AUTO RDS CH
STEREO TUNED
DOLBY SURROUND
PRO · LOGIC
MULTI TONE SP-A SP-B PHONO CD TUNER VDP/ TV VCR1 2 V.AUX D/TAPE
S17


a
b
j
h
c
r
s
k
m
q
n
g
d
p
f
e

(UPPER)

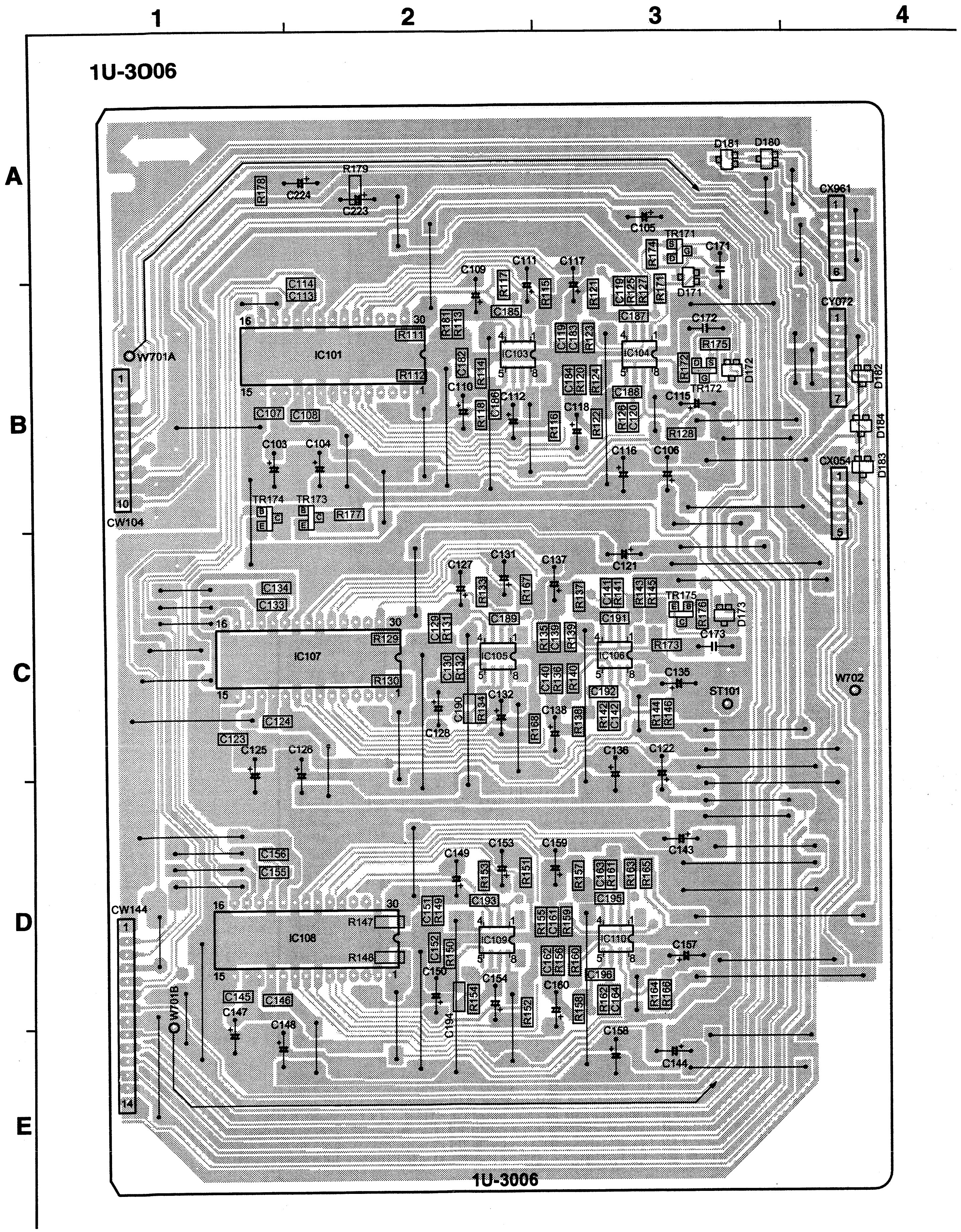
TERMINAL No.	94	93	92	91	90	89	88	87	86	85	84	83	82	81						
ELECTRODE	F1	F1	F1	NP	NP	P a	P b	P c	P j	P k	P s	P h	P r	P m						
TERMINAL No.	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61
ELECTRODE	P d	P n	P q	P p	P g	P f	P e	P s17	P s18	NP	16G	15G	14G	13G	12G	11G	10G	9G	8G	7G
TERMINAL No.								60	59	58	57	56	55	54	53	52	51	50	49	48
ELECTRODE								6G	5G	4G	3G	2G	1G	NP	NP	NP	NP	F2	F2	F2

(LOWER)

TERMINAL No.								35	36	37	38	39	40	41	42	43	44	45	46	47
ELECTRODE								NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	F2	F2	F2
TERMINAL No.	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
ELECTRODE	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
TERMINAL No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
ELECTRODE	F1	F1	F1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP						

Notes: F: Filament G: Grid A: Anode NP: No Pin

1U-3006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1U-3006
D181
D180
R178
C224
R179
C223
CX061
C105
TR171
R174
C171
D171
C109
C111
C117
R117
R115
R121
C119
C183
R125
R127
R171
CY072
C114
C113
R111
R113
C185
C187
C172
16
30
IC101
IC103
IC104
R175
D172
TR172
D182
W701A
R112
C182
R114
C184
R120
R124
C110
C106
C112
C118
R118
R116
R122
C188
R126
C120
C115
R128
15
1
C107
C108
C103
C104
C116
C106
CX054
D184
D183
CW104
TR174
TR173
R177
10
C127
C131
C137
C121
C134
C133
R133
R167
R137
C141
R141
R143
R145
TR175
R176
D173
C189
C191
C129
R131
IC107
IC105
IC106
R129
R135
C139
R139
R173
C173
R130
C130
R132
C140
R136
R140
C135
W702
ST101
C192
C124
C190
R134
C132
R188
C138
R138
R142
C142
R144
R146
C123
C125
C126
C128
C136
C122
C143
C156
C155
C149
C153
C159
R153
R151
R157
C163
R161
R163
R165
C193
C195
CW144
C151
R149
IC108
R147
R148
IC109
IC110
R155
C161
R159
C157
C152
R150
R162
R156
R160
C196
W701B
C145
C146
C150
C154
C160
C147
C148
C194
R154
R152
R158
R164
R166
C158
C144
14

NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol ⚠ ■ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.:	RN	14K	2E	182	G	FR
	Type	Shape and performance	Power	Resistance	Allowable error	Others

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

*** Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
Indicates number of zeros after effective number.
2-digit effective number.

- Units: ohm

1 R 2 ⇒ 1.2 ohm
1-digit effective number.
2-digit effective number, decimal point indicated by R.

- Units: ohm

● Capacitors

Ex.:	CE	04W	1H	2R2	M	BP
	Type	Shape and performance	Dielectric strength	Capacity	Allowable error	Others

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For change and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : +80% −20%	U : UL part
CP : Oil	2A : 100V	P : +100% −0%	C : CSA part
CM : Mica	2B : 125V	C : ±0.25pF	W : UL-CSA type
CF : Metallized	2C : 160V	D : ±0.5pF	F : Lead wire forming
CH : Metallized	2D : 200V	= : Others	
	2E : 250V		
	2H : 500V		
	2J : 630V		

*** Capacity (electrolyte only)**

2 2 2 ⇒ 2200µF
Indicates number of zeros after effective number.
2-digit effective number.

- Units: µF.

2 R 2 ⇒ 2.2µF
1-digit effective number.
2-digit effective number, decimal point indicated by R.

- Units: µF.

*** Capacity (except electrolyte)**

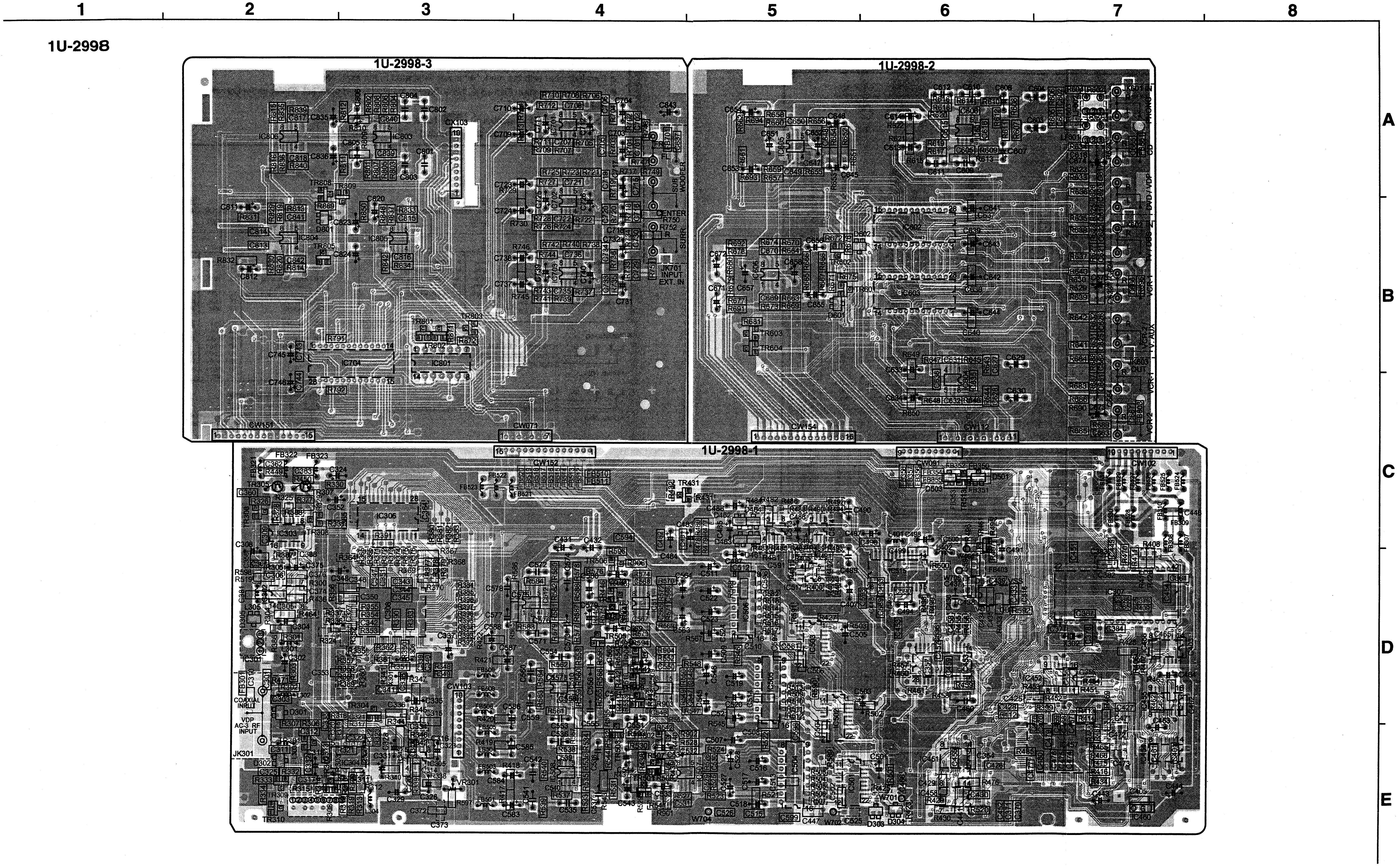
2 2 2 ⇒ 2200pF=0.0022µF
(More than 2)—Indicates number of zeros after effective number.
2-digit effective number.

- Units: pF.

2 2 1 ⇒ 220pF
(0 or 1) Indicates number of zeros after effective number.
2-digit effective number.

- Units: pF.

- When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.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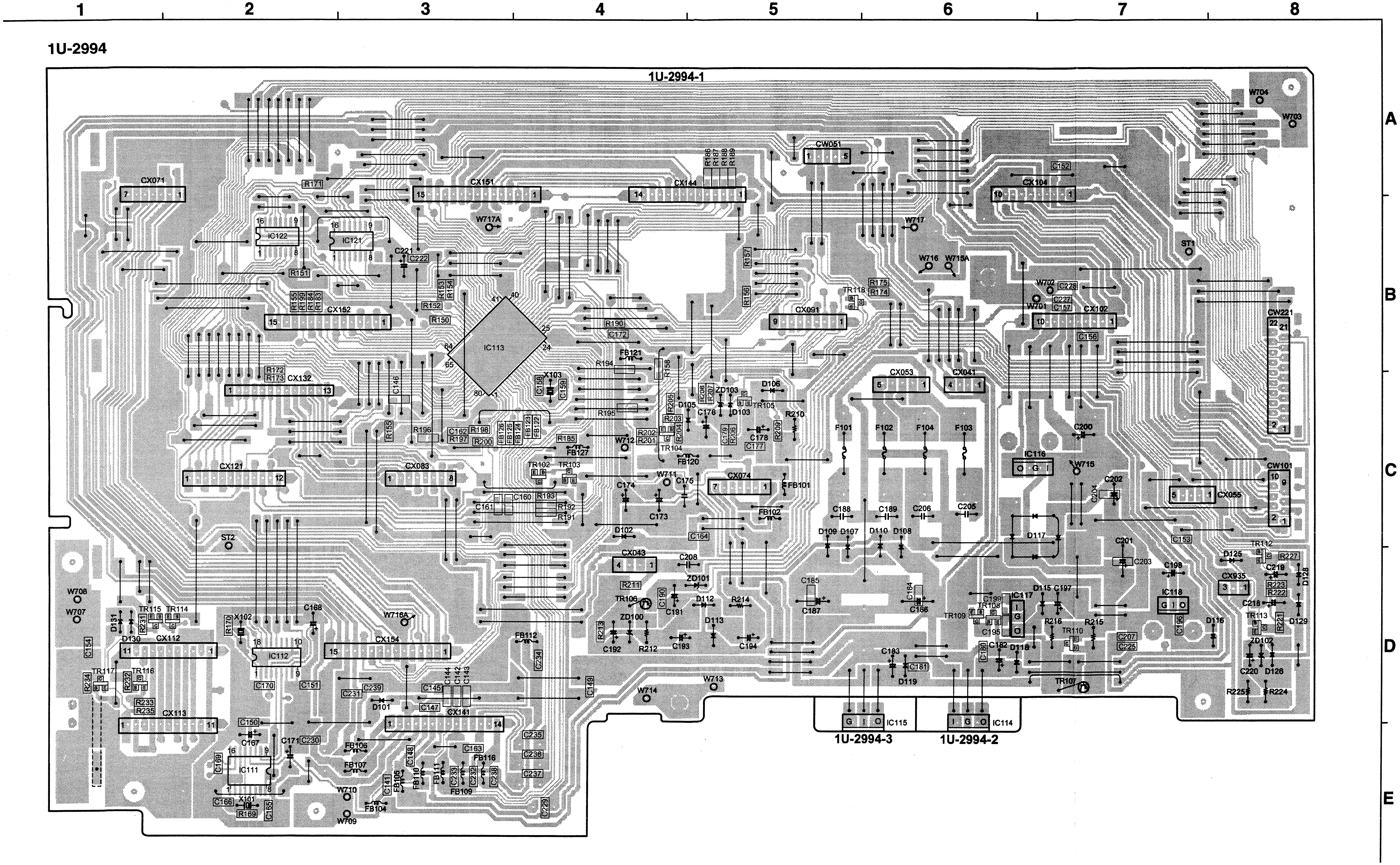
1U-2998
1U-2998-3
1U-2998-2
1U-2998-1
CW151
CW071
CW154
CW112
CW152
CW091
CW102
CW103
CX103
IC801
IC704
IC306
CENTER
SUB WOOFER
SURR.
JK701 INPUT EXT. IN
COAXIAL INPUT
VDP AC-3 RF INPUT
JK301
VR301
TR310

PRINTED WIRING BOARD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1U-2994-2
1U-2994-3
IC111
IC112
IC113
IC114
IC115
IC116
IC117
IC118
IC121
IC122
CX071
CX151
CX144
CW051
CX104
CX152
CX091
CX102
CW221
CX132
CX053
CX041
CX121
CX083
CX074
CW101
CX055
CX043
CX935
CX112
CX154
CX113
CX141
X101
X102
X103
W701
W702
W703
W704
W707
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W711
W712
W713
W714
W715
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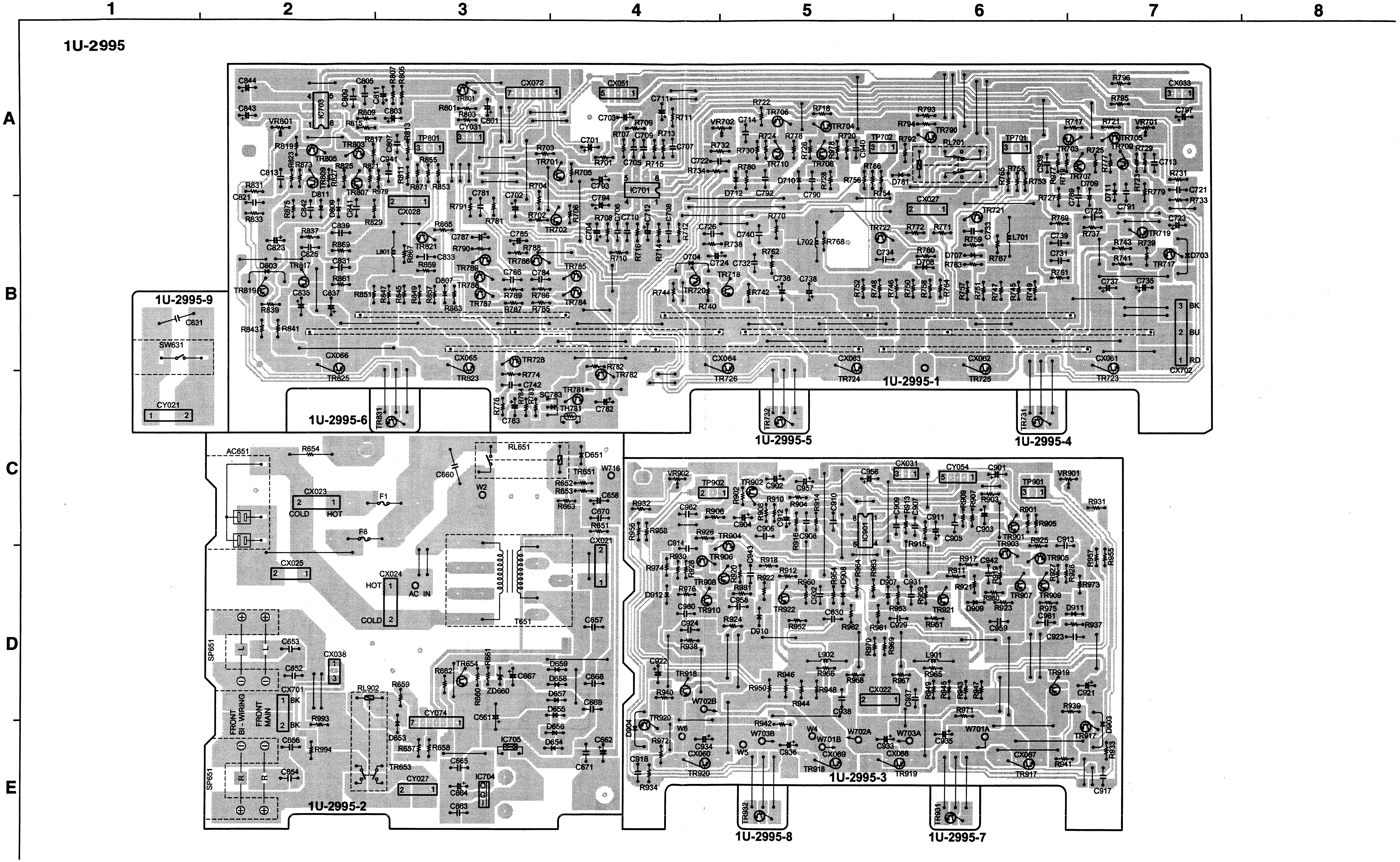
ST1
ST2
F101
F102
F103
F104
D117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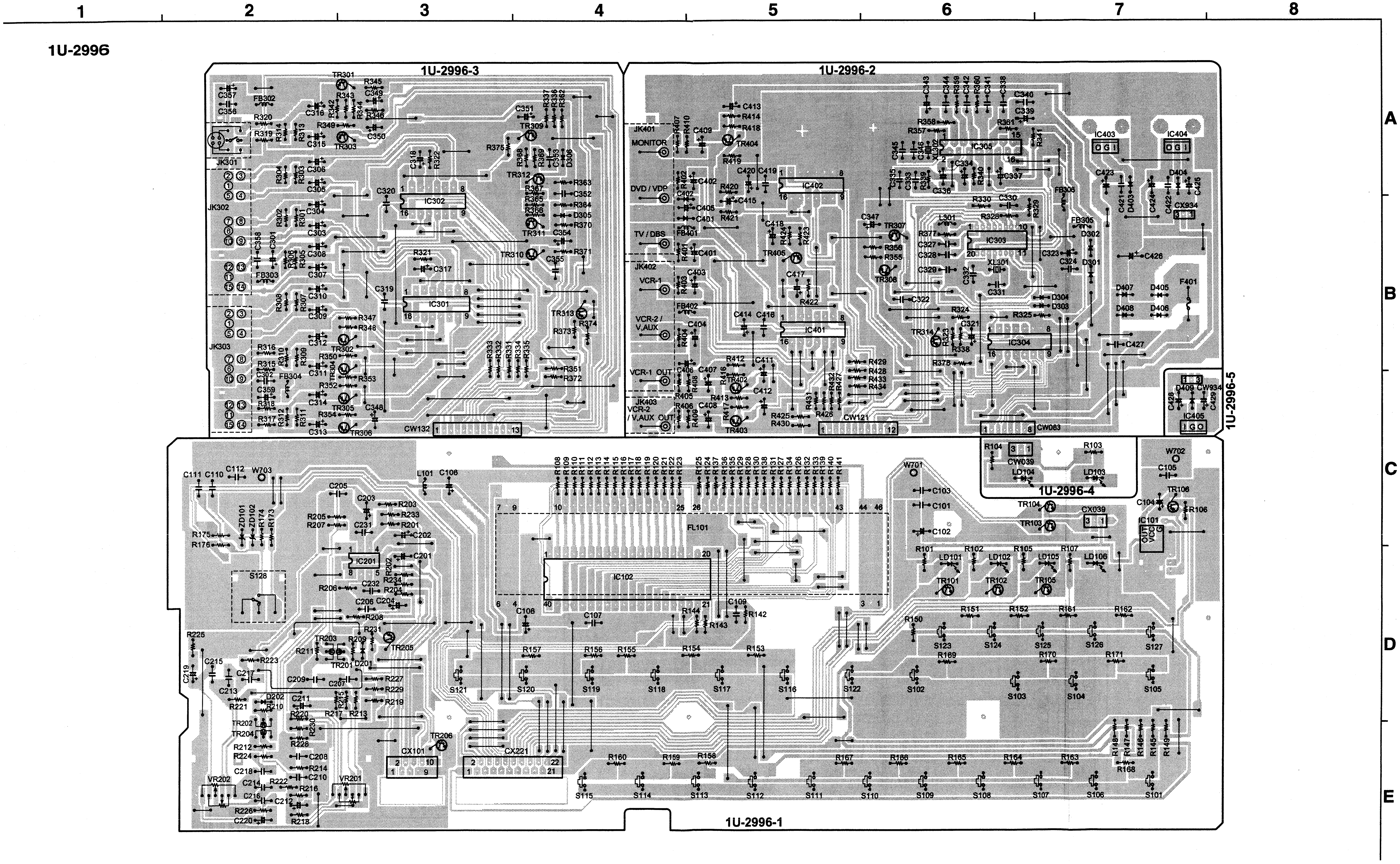
1U-2995-4
1U-2995-5
1U-2995-6
1U-2995-7
1U-2995-8
1U-2995-9
FRONT BI-WIRING
FRONT MAIN
AC IN
HOT
COLD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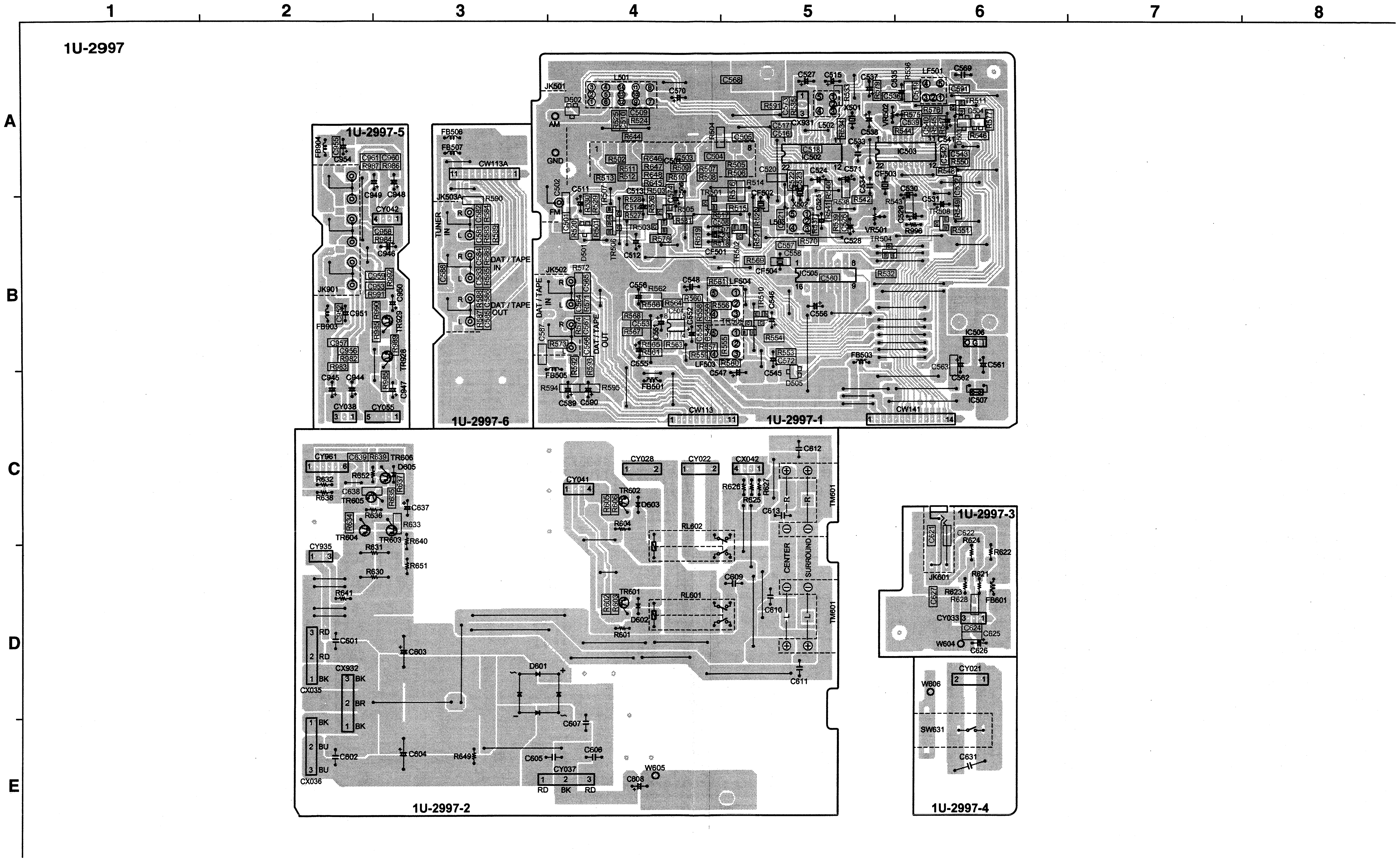
1U-2996-1
1U-2996-4
1U-2996-5
JK301
JK302
JK303
JK401
JK402
JK403
MONITOR
DVD / VDP
TV / DBS
VCR-1
VCR-2 / V.AUX
VCR-1 OUT
VCR-2 / V.AUX OUT
IC301
IC302
IC303
IC304
IC305
IC401
IC402
IC403
IC404
IC405
IC101
IC102
IC201
FL101
CW132
CW121
CW083
CW039
CW934
CX039
CX934
CX101
CX221
S128
VR201
VR202
F401
W701
W702
W703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1U-2997-3
1U-2997-4
JK501
AM
GND
FM
JK503A
TUNER IN
DAT / TAPE IN
DAT / TAPE OUT
JK502
JK901
CW113A
CW113
CW141
IC503
IC505
IC506
IC507
RL601
RL602
TM601
CENTER
SURROUND
JK601
SW631
CY961
CY935
CX932
CX035
CX036
CY037
CY028
CY022
CX042
CY041
CY038
CY055
CY042
CY033
CY021
W604
W605
W606
D601
RD
BK
BR
BU

PARTS LIST OF P.W.B. UNIT ASS'Y

1U-2994 MAIN UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC113	262 2373 100	IC TMP87CS71F-****	master-ucom
IC114	263 0812 006	IC NJM7815FA(S)	
IC115	263 0561 001	IC NJM7915FA	
IC116,117	263 0809 006	IC NJM7805FA(S)	
IC118	263 0554 005	IC NJM7905FA	
IC121,122	262 2375 904	IC TC4094BF	
TR102	269 0083 901	Transistor DTA114EK	
TR103	269 0054 901	Transistor DTC144EK	
TR104	274 0163 904	Transistor 2SD601A	
TR105	269 0054 901	Transistor DTC144EK	
TR106	271 0131 924	Transistor 2SA988(E/F)	
TR108	269 0047 905	Transistor DTA143EK	
TR109	269 0054 901	Transistor DTC144EK	
TR112,113	269 0083 901	Transistor DTA114EK	
TR114	269 0054 901	Transistor DTC144EK	
TR115	269 0055 900	Transistor DTA144EK	
TR116,117	275 0094 908	FET 2SK209-GR	
TR118	269 0055 900	Transistor DTA144EK	
D117	276 0305 001	Diode S4VB20	
D102	276 0553 905	Diode 1SR35-200A	
D103	276 0432 903	Diode 1SS270A	
D105	276 0432 903	Diode 1SS270A	
D106	276 0553 905	Diode 1SR35-200A	
D107~110	276 0548 910	Diode DSM1D2	
D112,113	276 0553 905	Diode 1SR35-200A	
D115,116	276 0432 903	Diode 1SS270A	
D118,119	276 0432 903	Diode 1SS270A	
D125,126	276 0553 905	Diode 1SR35-200A	
D128~131	276 0432 903	Diode 1SS270A	
ZD100	276 0645 978	Zener diode MTZJ36A	36V
ZD101	276 0644 937	Zener diode MTZJ9.1A	9.1V
ZD102	276 0643 996	Zener diode MTZJ5.6A	5.6V
ZD103	276 0634 905	Zener diode MTZJ3.3A	3.3V
RESISTORS GROUP			
R150~156	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R158	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R171~175	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R183~189	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R190	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R191~193	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R194,195	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R196	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R198~201	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R202	247 0013 900	Carbon chip 220kohm 1/10W	RM73B--224J
R203	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R204	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R205	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R206	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R207~209	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R210	241 2387 940	Carbon film 4.7ohm 1/4W(NB)	RD14B2E4R7JNBS
R211	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R212	241 2387 940	Carbon film 4.7ohm 1/4W(NB)	RD14B2E4R7JNBS
R213	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R214	241 2375 907	Carbon film 10ohm 1/4W(NB)	RD14B2E100JNBS
R216	241 2376 919	Carbon film 30ohm 1/4W(NB)	RD14B2E300JNBS
R221	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R222,223	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R224,225	244 2055 996	Metal oxide 1.2kohm 1W	RS14B3A122JNBS(S)
R227	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R231	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R232	247 0013 900	Carbon chip 220kohm 1/10W	RM73B--224J
R233	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
R234	247 0013 900	Carbon chip 220kohm 1/10W	RM73B--224J
R235	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
CAPACITORS GROUP			
C141,142	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C144	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C149	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C153	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C155,156	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C158,159	257 0004 903	Ceramic chip 56pF/50V	CC73SL1H560J
C160	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C164	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C172	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C173	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C174	254 4250 932	Electrolytic 220µF/6.3V	CE04W0J221M
C175	256 1034 982	Metalized 0.12µF/50V	CF93A1H124J
C176	254 4258 905	Electrolytic 4.7µF/35V	CE04W1V4R7M
C177	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C178	259 0007 702	Back up cap. 8200µF/5.5V	SB CAP==822=C
C179~181	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C182,183	254 4258 947	Electrolytic 47µF/35V	CE04W1V470M
C184,185	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C186,187	254 4259 700	Electrolytic 2200µF/35V	CE04W1V222MC
C188,189	256 1034 979	Metalized 0.1µF/50V	CF93A1H104J
C190	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C191,192	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C193	254 4261 743	Electrolytic 330µF/50V	CE04W1H331M
C194	254 4262 771	Electrolytic 330µF/63V	CE04W1J331MC
C195,196	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C197,198	254 4258 947	Electrolytic 47µF/35V	CE04W1V470M
C199	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C200	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C201	254 4403 705	Electrolytic 6800µF/25V	CE04W1E682MC
C202	254 4256 787	Electrolytic 1000µF/25V	CE04W1E102MC
C203,204	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C205,206	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C208	256 1034 979	Metalized 0.1µF/50V	CF93A1H104J

Ref. No.	Part No.	Part Name	Remarks	
C218,219	254 4260 977	Electrolytic 4.7µF/50V	CE04W1H4R7M	
C220	254 4260 980	Electrolytic 10µF/50V	CE04W1H100M	
C221	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M	
C222	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z	
C234,235	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z	
C239	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K	
OTHER PARTS GROUP				**Q'ty**
CW101	205 1056 001	10P connector socket TKC-V		1
CW221	205 1056 014	22P connector socket TKC-V		1
CX041	205 0343 045	4P connector base(KR-PH)		1
CX043	205 0233 045	4P EH connector base		1
CX053	205 0233 058	5P EH connector base		1
CX055	205 0343 058	5P connector base(KR-PH)		1
CX071	205 0943 021	7P connector base (TUC-P)		1
CX074	205 0343 074	7P connector base(KR-PH)		1
CX083	205 0884 096	8P connector base (TUC-P)		1
CX091	205 0884 038	9P connector base (TUC-P)		1
CX102	205 0884 054	10P connector base (TUC-P)		1
CX104	205 0884 054	10P connector base (TUC-P)		1
CX112,113	205 0884 067	11P connector base (TUC-P)		2
CX121	205 0884 070	12P connector base (TUC-P)		1
CX132	205 0943 005	13P connector base (TUC-P)		1
CX141	205 0884 012	14P connector base (TUC-P)		1
CX144	205 0884 012	14P connector base (TUC-P)		1
CX151,152	205 0884 041	15P connector base (TUC-P)		2
CX154	205 0884 041	15P connector base (TUC-P)		1
CX935	205 0343 032	3P connector base(KR-PH)		1
F101,102	202 0040 909	Fuse clip		4
F103,104	202 0040 909	Fuse clip		4
F101~104	206 1039 076	Fuse 2.5A		4
FB101~103	235 0049 900	Beads inductor		3
FB104~107	235 0049 900	Beads inductor		4
FB109~111	235 0049 900	Beads inductor		3
FB112~115	235 0049 900	Beads inductor		4
FB116	235 0049 900	Beads inductor		1
FB120,121	235 0049 900	Beads inductor		2
FB122~125	235 0106 908	Chip emifil (21A05)		4
FB126	235 0106 908	Chip emifil (21A05)		1
FB127	235 0049 900	Beads inductor		1
X103	399 0191 903	Ceramic resonator	CST4.00MGW -TF01	1
ST001,002	205 0452 017	Style Pin		2
	417 0476 010	Radiator	IC116, IC118	2
	471 3304 015	Screw 3X8 CBS-Z		2

1U-2995 POWER AMP. UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC701	263 0609 002	IC NJM2068DDC	
IC703	263 0609 002	IC NJM2068DDC	
IC704	263 0793 002	IC NJM7806FA(S)	
IC705	268 0073 905	IC ICP-N15	IC protector
IC901	263 0609 002	IC NJM2068DDC	
TR651	273 0429 904	Transistor 2SC3311A	
TR653,654	273 0429 904	Transistor 2SC3311A	
TR701,702	273 0253 918	Transistor 2SC2878(A/B)	
TR703,704	273 0235 923	Transistor 2SC1841(E/F)	
TR705~708	271 0131 924	Transistor 2SA988(E/F)	
TR709,710	273 0235 923	Transistor 2SC1841(E/F)	
TR717,718	274 0151 916	Transistor 2SD2004(P/Q)	
TR719,720	272 0107 919	Transistor 2SB1328(P/Q)	
TR721,722	273 0235 923	Transistor 2SC1841(E/F)	
TR728	271 0131 924	Transistor 2SA988(E/F)	
TR731,732	273 0323 000	Transistor 2SC3421 O/Y	
TR781	269 0040 902	Transistor DTC144ES (47K-47K)	
TR782	273 0429 904	Transistor 2SC3311A	
TR784	273 0429 904	Transistor 2SC3311A	
TR785	271 0192 905	Transistor 2SA933S(S)	
TR786,787	273 0429 904	Transistor 2SC3311A	
TR788	271 0192 905	Transistor 2SA933S(S)	
TR789,790	273 0429 904	Transistor 2SC3311A	
TR801	273 0253 918	Transistor 2SC2878(A/B)	
TR803	273 0235 923	Transistor 2SC1841(E/F)	
TR805	271 0131 924	Transistor 2SA988(E/F)	
TR807	271 0131 924	Transistor 2SA988(E/F)	
TR809	273 0235 923	Transistor 2SC1841(E/F)	
TR817	274 0151 916	Transistor 2SD2004(P/Q)	
TR819	272 0107 919	Transistor 2SB1328(P/Q)	
TR821	273 0235 923	Transistor 2SC1841(E/F)	
TR831	273 0323 000	Transistor 2SC3421 O/Y	
TR901,902	273 0253 918	Transistor 2SC2878(A/B)	
TR903,904	273 0235 923	Transistor 2SC1841(E/F)	
TR905~908	271 0131 924	Transistor 2SA988(E/F)	
TR909,910	273 0235 923	Transistor 2SC1841(E/F)	
TR917,918	274 0151 916	Transistor 2SD2004(P/Q)	
TR919,920	272 0107 919	Transistor 2SB1328(P/Q)	
TR921,922	273 0235 923	Transistor 2SC1841(E/F)	
TR931,932	273 0323 000	Transistor 2SC3421 O/Y	
D651	276 0432 903	Diode 1SS270A	
D653	276 0432 903	Diode 1SS270A	
D654~659	276 0553 905	Diode 1SR35-200A	

Ref. No.	Part No.	Part Name	Remarks
D703,704	276 0049 914	Diode 1S2076A	
D707~712	276 0432 903	Diode 1SS270A	
D781	276 0432 903	Diode 1SS270A	
D803	276 0049 914	Diode 1S2076A	
D807	276 0432 903	Diode 1SS270A	
D809	276 0432 903	Diode 1SS270A	
D811	276 0432 903	Diode 1SS270A	
D903,904	276 0049 914	Diode 1S2076A	
D907~912	276 0432 903	Diode 1SS270A	
ZD660	276 0644 911	Zener diode MTZJ7.5A	7.5V
RESISTORS GROUP			
R651	241 2375 978	Carbon film 20ohm 1/4W(NB)	RD14B2E200JNBS
R654	242 0073 000	Composition 2.2Mohm 1/2W	RC05GF2H225K
R659	244 2050 933	Metal oxide 180ohm 1W	RS14B3A181JNBS(S)
R725,726	241 2379 932	Carbon film 620ohm 1/4W(NB)	RD14B2E621JNBS
R727,728	241 2377 989	Carbon film 150ohm 1/4W(NB)	RD14B2E151JNBS
R739,740	241 2378 920	Carbon film 220ohm 1/4W(NB)	RD14B2E221JNBS
R741~744	241 2387 908	Carbon film 1ohm 1/4W(NB)	RD14B2E010JNBS
R745~752	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
R757~760	241 2380 950	Carbon film 2kohm 1/4W(NB)	RD14B2E202JNBS
R761,762	244 2051 987	Metal oxide 4.7ohm 1W	RS14B3A4R7JNBS(S)
R769,770	244 2043 937	Metal oxide 10ohm 1W	RS14B3A100JNBS(S)
R777,778	241 2379 932	Carbon film 620ohm 1/4W(NB)	RD14B2E621JNBS
R779,780	241 2377 989	Carbon film 150ohm 1/4W(NB)	RD14B2E151JNBS
R792	244 2052 986	Metal oxide 750ohm 1W	RS14B3A751JNBS(S)
R795,796	244 2052 960	Metal oxide 220ohm 1W	RS14B3A221JNBS(S)
R821,922	241 2379 932	Carbon film 620ohm 1/4W(NB)	RD14B2E621JNBS
R825	241 2379 932	Carbon film 620ohm 1/4W(NB)	RD14B2E621JNBS
R827	241 2379 932	Carbon film 620ohm 1/4W(NB)	RD14B2E621JNBS
R829	241 2377 989	Carbon film 150ohm 1/4W(NB)	RD14B2E151JNBS
R839	241 2378 920	Carbon film 220ohm 1/4W(NB)	RD14B2E221JNBS
R841	241 2387 908	Carbon film 1ohm 1/4W(NB)	RD14B2E010JNBS
R841,942	241 2387 908	Carbon film 1ohm 1/4W(NB)	RD14B2E010JNBS
R843	241 2387 908	Carbon film 1ohm 1/4W(NB)	RD14B2E010JNBS
R845	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
R847	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
R849	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
R851	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
R857	241 2380 950	Carbon film 2kohm 1/4W(NB)	RD14B2E202JNBS
R859	241 2380 950	Carbon film 2kohm 1/4W(NB)	RD14B2E202JNBS
R861	244 2051 987	Metal oxide 4.7ohm 1W	RS14B3A4R7JNBS(S)
R869	244 2043 937	Metal oxide 10ohm 1W	RS14B3A100JNBS(S)
R875	241 2377 989	Carbon film 150ohm 1/4W(NB)	RD14B2E151JNBS
R923,924	241 2377 989	Carbon film 150ohm 1/4W(NB)	RD14B2E151JNBS

Ref. No.	Part No.	Part Name	Remarks
R939,940	241 2378 920	Carbon film 220ohm 1/4W(NB)	RD14B2E221JNBS
R943~950	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S
R951,952	244 2051 987	Metal oxide 4.7ohm 1W	RS14B3A4R7JNBS(S
R953,954	241 2380 950	Carbon film 2kohm 1/4W(NB)	RD14B2E202JNBS
R959,960	241 2380 950	Carbon film 2kohm 1/4W(NB)	RD14B2E202JNBS
R967,968	244 2043 937	Metal oxide 10ohm 1W	RS14B3A100JNBS(S)
R971,972	241 2387 908	Carbon film 1ohm 1/4W(NB)	RD14B2E010JNBS
R973,974	241 2379 932	Carbon film 620ohm 1/4W(NB)	RD14B2E621JNBS
R975,976	241 2377 989	Carbon film 150ohm 1/4W(NB)	RD14B2E151JNBS
VR701,702	211 6129 909	Semi fixed resistor 4.7kohm	K06QB472
VR801	211 6129 909	Semi fixed resistor 4.7kohm	K06QB472
VR901	211 6129 909	Semi fixed resistor 4.7kohm	K06QB472
VR902	211 6129 909	Semi fixed resistor 4.7kohm	K06QB472
CAPACITORS GROUP			
C652~654	255 1265 936	Mylar film 0.01µF/50V	CQ93M1H103J(B)
C656	255 1265 936	Mylar film 0.01µF/50V	CQ93M1H103J(B)
C657	256 1034 979	Metalized 0.1µF/50V	CF93A1H104J
C658	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C660	253 8014 702	Ceramic 0.01µF/400V(AC)	CK45F2GAC103MC
C661	254 4256 790	Electrolytic 2200µF/25V	CE04W1E222MC
C662	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C663	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C664	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C665	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C667	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C668,669	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C701,702	254 4260 980	Electrolytic 10µF/50V	CE04W1H100M
C703,704	254 4260 951	Electrolytic 2.2µF/50V	CE04W1H2R2M
C705,706	253 4444 907	Ceramic 220pF/50V	CC45SL1H221J
C707,708	253 4537 908	Ceramic 27pF/50V	CC45SL1H270J
C709,710	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J
C711,712	254 4261 918	Electrolytic 47µF/50V	CE04W1H470M
C713,714	253 4537 966	Ceramic 47pF/50V	CC45SL1H470J
C721,722	255 1265 936	Mylar film 0.01µF/50V	CQ93M1H103J(B)
C723,724	254 4263 987	Electrolytic 10µF/100V	CE04W2A100M
C725,726	253 1128 909	Ceramic 220pF/500V	CK45B2H221K
C731,732	255 1265 978	Mylar film 0.022µF/50V	CQ93M1H223J(B)
C733,734	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C735~738	254 4263 987	Electrolytic 10µF/100V	CE04W2A100M
C738,740	256 1034 979	Metalized 0.1µF/50V	CF93A1H104J
C742	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C781	253 9039 906	BC ceramic cap. 0.1µF/25V	CK45=1E104Z
C782	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
C783	254 4254 912	Electrolytic 22µF/16V	CE04W1C220M
C784	253 9039 906	BC ceramic cap. 0.1µF/25V	CK45=1E104Z
C785	254 4250 945	Electrolytic 330µF/6.3V	CE04W0J331M
C786	253 9039 906	BC ceramic cap. 0.1µF/25V	CK45=1E104Z

Ref. No.	Part No.	Part Name	Remarks
C787	254 4250 945	Electrolytic 330µF/6.3V	CE04W0J331M
C789~792	256 1034 979	Metalized 0.1µF/50V	CF93A1H104J
C793,794	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C801	254 4260 980	Electrolytic 10µF/50V	CE04W1H100M
C803	254 4260 951	Electrolytic 2.2µF/50V	CE04W1H2R2M
C805	253 4444 907	Ceramic 220pF/50V	CC45SL1H221J
C807	253 4537 908	Ceramic 27pF/50V	CC45SL1H270J
C809	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J
C811	254 4261 918	Electrolytic 47µF/50V	CE04W1H470M
C813	253 4537 966	Ceramic 47pF/50V	CC45SL1H470J
C821	255 1265 936	Mylar film 0.01µF/50V	CQ93M1H103J(B)
C823	254 4263 987	Electrolytic10µF/100V	CE04W2A100M
C825	253 1128 909	Ceramic 220pF/500V	CK45B2H221K
C831	255 1265 978	Mylar film 0.022µF/50V	CQ93M1H223J(B)
C833	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C835	254 4263 987	Electrolytic 10µF/100V	CE04W2A100M
C837	254 4263 987	Electrolytic 10µF/100V	CE04W2A100M
C839	256 1034 979	Metalized 0.1µF/50V	CF93A1H104J
C841,842	256 1034 979	Metalized 0.1µF/50V	CF93A1H104J
C843,844	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C901,902	254 4260 980	Electrolytic 10µF/50V	CE04W1H100M
C903,904	254 4260 951	Electrolytic 2.2µF/50V	CE04W1H2R2M
C905,906	253 4444 907	Ceramic 220pF/50V	CC45SL1H221J
C907,908	253 4537 908	Ceramic 27pF/50V	CC45SL1H270J
C909,910	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J
C911,912	254 4261 918	Electrolytic 47µF/50V	CE04W1H470M
C913,914	253 4537 966	Ceramic 47pF/50V	CC45SL1H470J
C917,918	255 1265 936	Mylar film 0.01µF/50V	CQ93M1H103J(B)
C921,922	254 4263 987	Electrolytic 10µF/100V	CE04W2A100M
C923,924	253 1128 909	Ceramic 220pF/500V	CK45B2H221K
C929,930	255 1265 978	Mylar film 0.022µF/50V	CQ93M1H223J(B)
C931,932	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C933~936	254 4263 987	Electrolytic 10µF/100V	CE04W2A100M
C937,938	256 1034 979	Metalized 0.1µF/50V	CF93A1H104J
C939~943	253 4537 966	Ceramic 47pF/50V	CC45SL1H470J
C956,957	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C958~961	256 1034 979	Metalized 0.1µF/50V	CF93A1H104J
C962	253 9039 906	Ceramic 0.1µF/25V	CK45=1E104Z

OTHER PARTS GROUP

Ref. No.	Part No.	Part Name	Remarks	Q'ty
⚠AC651	203 3976 002	AC outlet (2P)		1
CX021,022	205 0581 001	2P VH connector base		2
CX023,024	205 0606 025	2P wrapping terminal		2
CX027	205 0581 001	2P VH connector base		1
CX028	205 0581 056	2P VH connector base		1
CX031	205 0343 032	3P connector base(KR-PH)		1
CX033	205 0343 032	3P connector base(KR-PH)		1
CX038	205 0343 032	3P connector base(KR-PH)		1
CX051	205 0355 059	5P KR connector base(L)		1
CX060~069	205 1037 062	6P KR pin header (TXX)		10
CX072	205 0355 075	7P KR connector base(L)		1
CX701	205 0087 026	2P wrapping terminal		
CX702	205 0087 039	3 P wrapping terminal		1
CY027	205 0581 001	2P VH connector base		1
CY031	205 0343 032	3P connector base(KR-PH)		
CY054	205 0343 058	5P connector base(KR-PH)		1
F001,008	202 0040 909	Fuse clip		4
F001,008	206 1046 014	Fuse 8A		2
L701,702	235 0068 004	Inductor 1µH		2
L801	235 0068 004	Inductor 1µH		1
L901	235 0068 004	Inductor 1µH		1
L902	235 0068 004	Inductor 1µH		1
RL651	214 0188 000	Relay VS-12MBNR-SM2(TV-8)		1
RL701	214 0190 001	Relay (MR82-12USR)		1
RL902	214 0129 001	Relay (DH2TU)		1
SC783	279 0016 904	Thyristor SF0R1A42		1
SP651	205 0632 002	8P SP terminal (V-1)		1
⚠T651	233 5818 004	Power trans. (Mini)-EU		1
TH781	279 0034 054	Posistor PTH9M04BC222TS2F333		1
TP701,702	205 0154 030	3P NH connector base		2
TP801	205 0154 030	3P NH connector base		1
TP901,902	205 0154 030	3P NH connector base		2
	412 4165 102	Bus bar		4
	412 4263 004	Bus bar (30X1)		2
	415 0309 026	P.V.C. tube (L=20)	for TH781	2
	417 0476 010	Radiator	for IC704	1
	471 3304 015	Screw 3X8 CBS-Z		1

1U-2996 VIDEO & DISPLAY UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	499 0290 007	Remocon sensor GP1U271X	
IC102	262 2035 008	IC MSC1937-03RS	
IC201	263 0609 002	IC NJM2068DDC	
IC301	263 0857 003	IC BA7626	
IC302	263 0856 004	IC BA7625	
IC303	262 2311 007	IC M35015-***SP	
IC304	262 2067 005	IC MC74HC4053N	
IC305	263 0682 003	IC NJM2229S	
IC401	263 0856 004	IC BA7625	
IC402	262 0522 005	IC TC4053BP	
IC403	263 0793 002	IC NJM7806FA(S)	
IC405	263 0793 002	IC NJM7806FA(S)	
TR101~105	269 0020 906	Transistor DTC114ES(10K-10K)	
TR106	269 0046 906	Transistor DTA114ES(10K-10K)	
TR201~204	275 0061 902	FET 2SK184(GR)/(BL)	
TR205	269 0046 906	Transistor DTA114ES(10K-10K)	
TR206	269 0020 906	Transistor DTC114ES(10K-10K)	
TR301~307	271 0290 904	Transistor 2PA1015GR	
TR309	271 0290 904	Transistor 2PA1015GR	
TR310	269 0020 906	Transistor DTC114ES(10K-10K)	
TR311	273 0446 903	Transistor 2PC1815BL	
TR312	271 0290 904	Transistor 2PA1015GR	
TR314	271 0290 904	Transistor 2PA1015GR	
TR402~405	271 0290 904	Transistor 2PA1015GR	
D201,202	276 0432 903	Diode 1SS270A	
D301~306	276 0432 903	Diode 1SS270A	
D401~403	276 0432 903	Diode 1SS270A	
D405~408	276 0548 910	Diode DSM1D2	
D409	276 0432 903	Diode 1SS270A	
ZD101,102	276 0637 902	Zener diode MTZJ6.2A	6.2V
LD101	393 9434 906	LED SEL1210S	Red
LD102	393 9452 904	LED SEL1410E	green
LD103	393 9567 006	LED LD-603MG	PRO-LOGK
LD104	393 9566 007	LED LD-603VR	DIGITAL
LD105	393 9452 904	LED SEL1410E	green
LD106	393 9434 906	LED SEL1210S	Red
FL101	393 4156 001	FLD FIP16FM7R	

Ref. No.	Part No.	Part Name	Remarks
RESISTORS GROUP			
VR201	211 0883 018	Variable resistor 30kohm	V14P25FC303K
VR202	211 0883 005	Variable resistor 10kohm	V14P25FC103K
CAPACITORS GROUP			
C101	253 9039 906	BC ceramic cap. 0.1μF/25V	CK45=1E104Z
C102	254 4252 969	Electrolytic 470μF/10V	CE04W1A471M
C104	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C105	253 9039 906	BC ceramic cap. 0.1μF/25V	CK45=1E104Z
C106	254 4261 921	Electrolytic 100μF/50V	CE04W1H101M
C107	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C108	254 4250 945	Electrolytic 330μF/6.3V	CE04W0J331M
C109	253 1179 903	Ceramic 100pF/50V	CK45B1H101K
C110,111	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C201,202	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C203,204	254 4254 938	Electrolytic 47μF/16V	CE04W1C470M
C205,206	253 4537 924	Ceramic 33pF/50V	CC45SL1H330J
C207,208	255 1264 940	Mylar film 2200pF/50V	CQ93M1H222J(B)
C209,210	256 1035 907	Metallized 0.18μF/50V	CF93A1H184J
C211,212	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C215,216	255 1265 949	Mylar film 0.012μF/50V	CQ93M1H123J(B)
C217,218	256 1034 940	Metallized 0.056μF/50V	CF93A1H563J
C219,220	254 4260 922	Electrolytic 0.33μF/50V	CE04W1HR33M
C231,232	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J
C233,234	254 3052 937	Electrolytic 100μF/50V	CE04W1A101MBP
C301	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C302	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C303~310	254 4260 977	Electrolytic 4.7μF/50V	CE04W1H4R7M
C311	254 4250 932	Electrolytic 220μF/6.3V	CE04W0J221M
C312	254 4250 958	Electrolytic 470μF/6.3V	CE04W0J471M
C313	254 4250 932	Electrolytic 220μF/6.3V	CE04W0J221M
C314	254 4250 958	Electrolytic 470μF/6.3V	CE04W0J471M
C315	254 4250 932	Electrolytic 220μF/6.3V	CE04W0J221M
C316	254 4250 958	Electrolytic 470μF/6.3V	CE04W0J471M
C317,318	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C319,320	253 1181 917	Ceramic 0.022μF/50V	CK45F1H223Z
C321	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C323	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M
C324	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C327~329	253 4537 924	Ceramic 33pF/50V	CC45SL1H330J
C330	253 9030 963	BC ceramic cap. 0.01μF/25V	CK45=1E103K
C331	253 4536 909	Ceramic 10pF/50V	CC45SL1H100D
C332	253 4536 925	Ceramic 12pF/50V	CC45SL1H120J
C333	255 1265 978	Mylar film 0.022μF/50V	CQ93M1H223J(B)
C334	254 4260 977	Electrolytic 4.7μF/50V	CE04W1H4R7M
C335	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J
C336	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C337	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C338	255 1264 908	Mylar film 1000pF/50V	CQ93M1H102J(B)
C339	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M

Ref. No.	Part No.	Part Name	Remarks
C340	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C341	255 1264 911	Mylar film 1200pF/50V	CQ93M1H122J(B)
C342	253 1179 929	Ceramic 150pF/50V	CK45B1H151K
C343	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C344	256 1034 953	Metalized 0.068μF/50V	CF93A1H683J
C345	253 1179 987	Ceramic 470pF/50V	CK45B1H471K
C346	253 9030 934	BC ceramic cap. 1000pF/25V	CK45=1E332K
C347,348	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C349,350	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M
C351	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C352,353	256 1034 937	Metallized 0.047μF/50V	CF93A1H473J
C354	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C355	256 1034 937	Metallized 0.047μF/50V	CF93A1H473J
C356	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C357	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C358	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C359	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C401~404	254 4260 977	Electrolytic 4.7μF/50V	CE04W1H4R7M
C405,406	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C407~409	254 4250 958	Electrolytic 470μF/6.3V	CE04W0J471M
C411~413	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C414,415	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M
C416	253 1181 917	Ceramic 0.022μF/50V	CK45F1H223Z
C417	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C418	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C419	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C420	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C421,422	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C423	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C425	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C426	254 4472 707	Electrolytic 4700μF/16V	CE04W1C472MC
C427	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C428,429	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M

OTHER PARTS GROUP				Q'ty
CW083	205 0885 095	8P connector socket (TUC-P)		1
CW121	205 0885 079	12P connector socket (TUC-P)		1
CW132	205 0942 006	13P connector socket(TUC-P)		1
CX039	205 0355 033	3P KR connector base (L)		1
CX101	205 1055 002	10P connector base (TKC-V)		1
CX221	205 1055 015	22P connector base (TKC-V)		1
CX934	205 0343 032	3P connector base(KR-PH)		1
F401	202 0040 909	Fuse clip		2
F401	206 1039 076	Fuse 2.5A		1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
FB302~306	235 0049 900	Beads inductor		6
JK301	205 0902 004	1P S-terminal (SW)		1
JK302,303	204 8415 011	3P S-terminal		2
JK401,402	204 8516 017	3P pin jack		2
JK403	204 8512 008	1P pin jack		1
L101	235 0060 989	Inductor 120μH		1
L301	235 0060 963	Inductor 15μH		1
S101~122	212 5604 910	Tact switch		22
S128	212 0373 000	Rotary encorder EC16B		1
XL301	399 0153 006	Crystal 14.32MHZ-12PF		1
XL302	399 0105 009	Ceramic resonator CSB503F2		1
	417 0476 010	Radiator	for IC403	1
	471 3304 015	Screw 3X8 CBS-Z		1

1U-2997 TUNER UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC501	216 0102 008	Front end	
IC502	263 0891 001	IC LA1265(S)	
IC503	263 0439 007	IC LA3401	
IC504	263 0615 902	IC BA15218F	
IC505	262 2348 009	IC LM7001JU	
IC506	263 0801 004	IC NJM7812FA(S)	
IC507	268 0073 905	IC ICP-N15	IC protector
TR502	273 0411 909	Transistor 2SC2996-Y	
TR503,504	269 0083 901	Transistor DTA114EK	
TR505	269 0114 906	Transistor RN2402	
TR506	273 0403 904	Transistor 2SC2712-Y/GR	
TR507	275 0075 901	FET 2SK209-Y/GR	
TR508	269 0054 901	Transistor DTC144EK	
TR509,510	269 0066 902	Transistor DTC323TK	
TR511	269 0086 908	Transistor DTA114TK	
TR601,602	273 0429 904	Transistor 2SC3311A	
TR928,929	273 0253 918	Transistor 2SC2878(A/B)	
D501~505	276 0438 910	Diode MA151A	
D601	276 0371 006	Diode S10VB20F9	
D602,603	276 0432 903	Diode 1SS270A	
RESISTORS GROUP			
R501	247 0002 966	Carbon chip 10ohm 1/10W	RM73B--100J
R503	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R504~514	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R515	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R516	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R518	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R519	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R520	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R521	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R522	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R523	247 0007 961	Carbon chip 1.2kohm 1/10W	RM73B--122J
R524,525	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R526	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R527	247 0009 969	Carbon chip 8.2kohm 1/10W	RM73B--822J
R528	247 0008 986	Carbon chip 3.9kohm 1/10W	RM73B--392J
R529	247 0006 946	Carbon chip 390ohm 1/10W	RM73B--391J
R530	247 0005 947	Carbon chip 150ohm 1/10W	RM73B--151J
R531	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R532	247 0005 921	Carbon chip 120ohm 1/10W	RM73B--121J
R533	247 0010 929	Carbon chip 15kohm 1/10W	RM73B--153J
R534	247 0005 921	Carbon chip 120ohm 1/10W	RM73B--121J
R535	247 0010 945	Carbon chip 18kohm 1/10W	RM73B--183J
R536	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R537	247 0011 986	Carbon chip 68kohm 1/10W	RM73B--683J
R538	247 0009 943	Carbon chip 6.8kohm 1/10W	RM73B--682J
R539	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R540,541	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R542,543	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R544,545	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R546	247 0011 973	Carbon chip 62kohm 1/10W	RM73B--623J
R547	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R548	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R549	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R550	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R551	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R553~556	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R557,558	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R559,560	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R561,562	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R563,564	247 0008 986	Carbon chip 3.9kohm 1/10W	RM73B--392J
R565,566	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R567,568	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R569	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R571,572	247 0011 973	Carbon chip 62kohm 1/10W	RM73B--623J
R573,574	247 0015 966	Carbon chip 2.7Mohm 1/10W	RM73B--275J
R575,576	247 0012 943	Carbon chip 120kohm 1/10W	RM73B--124J
R577	247 0010 961	Carbon chip 22kohm 1/10W	RM73B--223J
R578~581	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R592,593	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R594,595	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
R601	244 2050 933	Metal oxide 180ohm 1W	RS14B3A181JNBS(S)
R602	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R603	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R604	244 2050 933	Metal oxide 180ohm 1W	RS14B3A181JNBS(S)
R605	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R606	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R621	244 2052 960	Metal oxide 220ohm 1W	RS14B3A221JNBS(S)
R623	244 2052 960	Metal oxide 220ohm 1W	RS14B3A221JNBS(S)
R641	244 2055 996	Metal oxide 1.2kohm 1W	RS14B3A122JNBS(S)
R644	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R647,648	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R982~984	247 0007 903	Carbon chip 680ohm 1/10W	RM73B--681J
R985	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R988	247 0010 961	Carbon chip 22kohm 1/10W	RM73B--223J
R989	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R990,991	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R992	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
VR501	211 6093 941	Semi fixed resistor 10kohm	V06PB103
VR502	211 6093 970	Semi fixed resistor 100kohm	V06PB104

Ref. No.	Part No.	Part Name	Remarks
CAPACITORS GROUP			
C501,502	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C503~505	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C507,508	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C509	257 0002 947	Ceramic chip 12pF/50V	CC73SL1H120J
C510	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C511	254 4260 906	Electrolytic 0.1μF/50V	CE04W1H0R1M
C512	254 4254 954	Electrolytic 220μF/16V	CE04W1C221M
C513	254 3056 917	Electrolytic 1μF/50V	CE04D1H010MBP
C514	257 0010 942	Ceramic chip 0.022μF/50V	CK73B1H223K
C515	254 4254 938	Electrolytic 47μF/16V	CE04W1C470M
C516,517	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C520	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C521~523	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C524	254 4260 935	Electrolytic 0.47μF/50V	CE04W1HR47M
C525	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M
C526	257 0010 942	Ceramic chip 0.022μF/50V	CK73B1H223K
C527	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C528	254 4254 938	Electrolytic 47μF/16V	CE04W1C470M
C529	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C530	254 4260 919	Electrolytic 0.22μF/50V	CE04W1HR22M
C531	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C532	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C533	256 1034 937	Metallized 0.047μF/50V	CF93A1H473J
C534	256 1034 940	Metallized 0.056μF/50V	CF93A1H563J
C535	254 3053 910	Electrolytic 22μF/16V	CE04D1C220MBP
C536	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C538	254 4254 912	Electrolytic 22μF/16V	CE04W1C220M
C539,540	257 0006 972	Ceramic chip 750pF/50V	CC73SL1H751J
C541	254 4260 951	Electrolytic 2.2μF/50V	CE04W1H2R2M
C544	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C545~548	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C551,552	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C553,554	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C555,556	254 4254 912	Electrolytic 22μF/16V	CE04W1C220M
C557,558	257 0002 976	Ceramic chip 16pF/50V	CC73SL1H160J
C559	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C560	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C561,562	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C563	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C568	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C569	253 1146 907	Ceramic 0.01μF/50V	CK45F1H103Z
C570	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C571	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C574	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C587	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C589,590	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C591	254 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C601,602	256 1042 903	Metalized 0.1μF/250V	CF93A2E104K
C603,604	254 6211 005	Electrolytic 12000μF/63V	CE68W1J123M(DL)
C605~607	256 1042 903	Metalized 0.1μF/250V	CF93A2E104K

Ref. No.	Part No.	Part Name	Remarks
C608	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C609~613	255 1265 936	Mylar film 0.01μF/50V	CQ93M1H103J(B)
C621,622	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C624,625	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C631	253 8014 702	Ceramic 0.01μF/400V(AC)	CK45F2GAC103MC
C944~947	254 4254 938	Electrolytic 47μF/16V	CE04W1C470M
C950	254 4254 912	Electrolytic 22μF/16V	CE04W1C220M
C951	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C952	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C953	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J

OTHER PARTS GROUP				Q'ty
CF501	261 0135 907	Ceramic filter MA8		1
CF502	261 0136 906	Ceramic filter MS2G		1
CF503	261 0079 005	Resonator CSB456F11		1
CF504	399 0075 003	Crystal 7.2 MHz		1
CW113	205 0885 066	11P connector socket (TUC-P)		1
CW141	205 0885 011	14P connector socket (TUC-P)		1
CX035,036	205 0087 039	3 P wrapping terminal		2
CX042	205 0343 045	4P connector base(KR-PH)		1
CX931	205 0190 036	3P NH connector base		1
CX932	205 0087 039	3 P wrapping terminal		1
CY021,022	205 0581 001	2P VH connector base		2
CY028	205 0581 056	2P VH connector base		1
CY033	205 0343 032	3P connector base(KR-PH)		1
CY037	205 0087 039	3 P wrapping terminal		1
CY038	205 0343 032	3P connector base(KR-PH)		1
CY041,042	205 0343 045	4P connector base(KR-PH)		2
CY055	205 0343 058	5P connector base(KR-PH)		1
CY935	205 0343 032	3P connector base(KR-PH)		1
FB501	235 0049 900	Beads inductor		1
FB503	235 0049 900	Beads inductor		1
FB505	235 0049 900	Beads inductor		1
FB903	235 0049 900	Beads inductor		1
JK501	205 0847 004	3P antenna terminal (PAL/F)		1
JK502	204 8545 004	4P pin jack (GND)		1
JK601	204 8264 013	Headphone jack (NI)		1
JK901	204 8540 009	4 P pin jack		1
L501	231 2096 001	MW ant.-osc. coil		1
L502	231 2085 009	FM det. trans.		1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
L503	231 1138 009	AM IFT		1
RL601	214 0154 005	Relay (VB24SMBU)		1
RL602	214 0129 001	Relay (DH2TU)		1
⚠SW631	212 1031 008	Power switch (TV-5)		1
TM601	205 0632 002	8P SP terminal (V-1)		1
X501	261 0031 001	Ceramic filter BFU450C4		1
X502	261 0116 007	Ceramic filter SFU450B3		1
	414 0819 005	Earth plate		1
	417 0476 010	Radiator	for IC506	1
	471 3304 015	Screw 3X8 CBS-Z		1

1U-2998 AUDIO & DSP UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC301	269 0097 007	IC GP1F32R	
IC302	262 2384 908	IC SN74HCU04NS	
IC303	262 2386 906	IC SN74HC151NS	
IC304	263 1018 003	IC MC14577CP	
IC305	263 0687 901	IC BA4560FT	
IC306	262 2371 908	IC BR62256F-70LL	
IC307	262 2374 002	IC TMP87CM43N-****	SUB-UCOM
IC308	262 2372 004	IC PM4007A	
IC454	262 1718 902	IC TC74HC00AF	
IC455	262 1348 903	IC TC74HC123AF	
IC456	262 2385 907	IC SN74HC14NS	
IC457	262 2370 006	IC ZR38600	
IC458	262 2376 903	IC TC74HCT7007AF	
IC460	263 1048 002	IC BA033T	
IC501~503	262 2210 904	IC SM5841HS	
IC504~506	262 2145 008	IC PCM69AP	
IC507~512	263 0896 909	IC NJM2068MD	
IC513,514	263 1047 906	IC NJM2115M	
IC515	262 2158 901	IC AK5340-VS-E1	
IC516	399 0300 008	IC SG-531PH(12.288MHz)	
IC517	263 0673 902	IC BA10393F	
IC601	263 0896 909	IC NJM2068MD	
IC602	262 2034 009	IC TC9273N-007	
IC603	262 2033 000	IC TC9273N-004	
IC604~606	263 0615 902	IC BA15218F	
IC701~703	263 0615 902	IC BA15218F	
IC704	262 1853 100	IC NJU7313AL	
IC803~806	263 0615 902	IC BA15218F	
TR301,302	274 0163 904	Transistor 2SD601A	
TR303,304	272 0125 904	Transistor 2SB709A	
TR309,310	274 0163 904	Transistor 2SD601A	
TR431	269 0083 901	Transistor DTA114EK	
TR501~512	273 0414 906	Transistor 2SC3326(A/B)	
TR513	269 0082 902	Transistor DTC114EK	
TR601	275 0075 901	FET 2SK209-Y/GR	
TR603	269 0055 900	Transistor DTA144EK	
TR604	269 0054 901	Transistor DTC144EK	
TR805	275 0094 908	FET 2SK209-GR	
TR808	269 0055 900	Transistor DTA144EK	
TR809	269 0054 901	Transistor DTC144EK	

Ref. No.	Part No.	Part Name	Remarks
D301~303	276 0438 910	Diode MA151A	
D461~464	276 0438 910	Diode MA151A	
D501	276 0438 910	Diode MA151A	
D503	276 0438 910	Diode MA151A	
D601,602	276 0438 910	Diode MA151A	
D801	276 0438 910	Diode MA151A	
CD303	276 0663 905	Diode KV1851-TL	
RESISTORS GROUP			
R300	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R302	247 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
R303	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R305	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R306	247 0006 988	Carbon chip 560ohm 1/10W	RM73B--561J
R307	247 0004 993	Carbon chip 91ohm 1/10W	RM73B--910J
R308~310	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R311	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R312	247 0005 947	Carbon chip 150ohm 1/10W	RM73B--151J
R313	247 0008 928	Carbon chip 2.2kohm 1/10W	RM73B--222J
R314~317	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R318	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R319,320	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R321	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R322	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R323	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R324	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R332	247 0008 902	Carbon chip 1.8kohm 1/10W	RM73B--182J
R333,334	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R335,336	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R337	247 0008 986	Carbon chip 3.9kohm 1/10W	RM73B--392J
R339	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R340	247 0009 969	Carbon chip 8.2kohm 1/10W	RM73B--822J
R341	247 0010 987	Carbon chip 27kohm 1/10W	RM73B--273J
R342	247 0011 986	Carbon chip 68kohm 1/10W	RM73B--683J
R343,344	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R345	247 0005 921	Carbon chip 120ohm 1/10W	RM73B--121J
R346~349	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R350	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R351	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R352~370	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R371~385	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R386	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R387~398	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R399	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R400~403	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R404	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K

Ref. No.	Part No.	Part Name	Remarks
R405	247 0010 903	Carbon chip 12kohm 1/10W	RM73B--123J
R406	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R408,409	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R410,411	247 0008 915	Carbon chip 2kohm 1/10W	RM73B--202J
R412~416	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R417~422	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R425	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R428~431	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R432	247 0010 958	Carbon chip 20kohm 1/10W	RM73B--203J
R433	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R434	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R435	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R437,438	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R439,440	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R441,442	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R443,444	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R445,446	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R447,448	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R449,450	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R462,463	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R467~469	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R471	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R477~480	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R481,482	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R483~486	247 0009 998	Carbon chip 11kohm 1/10W	RM73B--113J
R487~490	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R491~494	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R496	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R497	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R498~500	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R501~503	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R504~518	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R520	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R521,522	247 0007 961	Carbon chip 1.2kohm 1/10W	RM73B--122J
R523,524	247 0006 988	Carbon chip 560ohm 1/10W	RM73B--561J
R525~528	247 0009 943	Carbon chip 6.8kohm 1/10W	RM73B--682J
R529,530	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R531,532	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R533,534	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R535,536	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R537,538	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R539,540	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R541,542	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R543,544	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R545,546	247 0007 961	Carbon chip 1.2kohm 1/10W	RM73B--122J
R547,548	247 0006 988	Carbon chip 560ohm 1/10W	RM73B--561J
R549	247 0009 914	Carbon chip 5.1kohm 1/10W	RM73B--512J
R550	247 0009 943	Carbon chip 6.8kohm 1/10W	RM73B--682J
R551	247 0009 914	Carbon chip 5.1kohm 1/10W	RM73B--512J
R552	247 0009 943	Carbon chip 6.8kohm 1/10W	RM73B--682J
R553,554	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J

Ref. No.	Part No.	Part Name	Remarks
R555,556	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R557	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R558	247 0009 943	Carbon chip 6.8kohm 1/10W	RM73B--682J
R560	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R561	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R562	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R563,564	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R565,566	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R567,568	247 0007 961	Carbon chip 1.2kohm 1/10W	RM73B--122J
R569,570	247 0006 988	Carbon chip 560ohm 1/10W	RM73B--561J
R571~574	247 0009 914	Carbon chip 5.1kohm 1/10W	RM73B--512J
R575,576	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R577,578	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R579,580	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R583,584	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R585,586	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R587,588	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R592	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R593~596	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R601,602	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R603,604	247 0006 946	Carbon chip 390ohm 1/10W	RM73B--391J
R605,606	247 0011 986	Carbon chip 68kohm 1/10W	RM73B--683J
R607,608	247 0012 969	Carbon chip 150kohm 1/10W	RM73B--154J
R609,610	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R611,612	247 0005 992	Carbon chip 240ohm 1/10W	RM73B--241J
R613,614	247 0012 956	Carbon chip 130kohm 1/10W	RM73B--134J
R615,616	247 0009 998	Carbon chip 11kohm 1/10W	RM73B--113J
R617,618	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R619,620	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R621,622	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R623~632	247 0015 966	Carbon chip 2.7Mohm 1/10W	RM73B--275J
R633~642	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R643,644	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
R645,646	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R647,648	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R649,650	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R651~654	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R655~658	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R659,660	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R663,664	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R665,666	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R667~672	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R673,674	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R677,678	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R679,680	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R681	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R683~686	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R687~690	247 0015 966	Carbon chip 2.7Mohm 1/10W	RM73B--275J
R691,692	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R693~695	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K

Ref. No.	Part No.	Part Name	Remarks
R701,702	247 0011 973	Carbon chip 62kohm 1/10W	RM73B--623J
R703,704	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
R705,706	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R709,710	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R711,712	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R713,714	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R717,718	247 0011 973	Carbon chip 62kohm 1/10W	RM73B--623J
R719,720	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
R721,722	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R725,726	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R727	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R728	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R729	247 0008 986	Carbon chip 3.9kohm 1/10W	RM73B--392J
R730	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R733,734	247 0011 973	Carbon chip 62kohm 1/10W	RM73B--623J
R735,736	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
R737,738	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R741,742	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R743,744	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R745,746	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R747~752	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R791,792	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R801,802	247 0010 961	Carbon chip 22kohm 1/10W	RM73B--223J
R803,804	247 0010 932	Carbon chip 16kohm 1/10W	RM73B--163J
R805~808	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R809,810	247 0007 932	Carbon chip 910ohm 1/10W	RM73B--911J
R811,812	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R813,814	247 0009 943	Carbon chip 6.8kohm 1/10W	RM73B--682J
R815,816	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R819,820	247 0008 986	Carbon chip 3.9kohm 1/10W	RM73B--392J
R829,830	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R831,832	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R833,834	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R835,836	247 0008 928	Carbon chip 2.2kohm 1/10W	RM73B--222J
R837	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R839,840	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R842	247 0009 969	Carbon chip 8.2kohm 1/10W	RM73B--822J
R846	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R850	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R869	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R901~906	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
CAPACITORS GROUP			
C301	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C302	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
C303	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C304	254 4256 923	Electrolytic 33µF/25V	CE04W1E330M
C305	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C306	257 0003 904	Ceramic chip 22pF/50V	CC73SL1H220J

Ref. No.	Part No.	Part Name	Remarks
C307	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C308	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C309,310	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C311	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C312	257 0011 941	Ceramic chip 0.022µF/25V	CK73B1E223K
C313~315	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C316	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C317	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C318	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C319	257 0004 932	Ceramic chip 75pF/50V	CC73SL1H750J
C320	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C321	257 0011 996	Ceramic chip 0.1µF/25V	CK73B1E104K
C322	257 0010 900	Ceramic chip 0.01µF/50V	CK73B1H103K
C323	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C325	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C326	254 3061 902	Electrolytic 1µF/50V	CE04D1H010MTBP (SRE)
C327	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C328	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C329	254 3061 902	Electrolytic 1µF/50V	CE04D1H010MTBP (SRE)
C330	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C331	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C332~334	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C335	254 3053 936	Electrolytic 47µF/16V	CE04D1C470MBP
C336	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C337	254 4252 930	Electrolytic 100µF/10V	CE04W1A101M
C338	257 0002 989	Ceramic chip 18pF/50V	CC73SL1H180J
C339	257 0001 922	Ceramic chip 1 pF/50V	CC73SL1H010C
C340,341	257 0010 900	Ceramic chip 0.01µF/50V	CK73B1H103K
C342	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C343	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C344	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C345	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C346	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C347	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C348	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C349	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C350	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C351	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C352	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C353	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C358	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C360	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C361	257 0011 996	Ceramic chip 0.1µF/25V	CK73B1E104Z
C362,363	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C377,378	257 0004 903	Ceramic chip 56pF/50V	CC73SL1H560J
C382	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C383	257 0005 944	Ceramic chip 220pF/50V	CK73B1H221J
C384,385	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C387	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C388	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z

Ref. No.	Part No.	Part Name	Remarks
C407	254 4196 944	Electrolytic 1µF/50V	CE04W1H010M (SRA)
C425	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C431,432	254 4196 944	Electrolytic 1µF/50V	CE04W1H010M (SRA)
C434	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C435	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C436	256 1034 979	Metalized 0.1µF/50V	CF93A1H104J
C437,438	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C441	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C443	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C444	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C445,446	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C448	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C461,462	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C463,464	254 4260 935	Electrolytic 0.47µF/50V	CE04W1HR47M
C465~467	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C468	257 0011 983	Ceramic chip 0.047µF/25V	CK73B1E473K
C469	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C470,471	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C472	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C473	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C474	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C475	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C476	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C478	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C479	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C480	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C481,482	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C483,484	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C485,486	254 4196 944	Electrolytic 1µF/50V	CE04W1H010M(SRA)
C487,488	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C489,490	255 1264 924	Mylar film 1500pF/50V	CQ93M1H152J(B)
C492	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C494	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C495	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C496	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C497,498	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C499	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C500	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C501	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C502	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C503	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C504	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C505	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C506	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C507	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C508	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C509	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C510	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C511	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)

Ref. No.	Part No.	Part Name	Remarks
C512~515	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C516,517	254 4252 930	Electrolytic 100µF/10V	CE04W1A101M
C518	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C519,520	254 4252 930	Electrolytic 100µF/10V	CE04W1A101M
C521	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C522,523	254 4252 930	Electrolytic 100µF/10V	CE04W1A101M
C524	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C525,526	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C527,528	254 4252 930	Electrolytic 100µF/10V	CE04W1A101M
C529~532	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C533,534	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C535,536	255 4201 968	Polypropylene film 470pF/50V	CQ93P1H471J
C537,538	255 4201 984	Polypropylene film 560pF/50V	CQ93P1H561J
C539,540	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C541,542	255 1265 907	Mylar film 6800pF/50V	CQ93M1H682J(B)
C543,544	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C545,546	254 4252 930	Electrolytic 100µF/10V	CE04W1A101M
C547~550	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C551,552	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C553	255 4202 925	Polypropylene film 820pF/50V	CQ93P1H821J
C555	255 4201 926	Polypropylene film 330pF/50V	CQ93P1H331J
C556	256 1034 979	Metallized 0.1µF/50V	CF93A1H104J
C557,558	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C559,560	255 1265 907	Mylar film 6800pF/50V	CQ93M1H682J(B)
C561,562	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C563,564	254 4252 930	Electrolytic 100µF/10V	CE04W1A101M
C565~568	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C569,570	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C571,572	255 4202 925	Polypropylene film 820pF/50V	CQ93P1H821J
C573,574	255 4201 926	Polypropylene film 330pF/50V	CQ93P1H331J
C575,576	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C577,578	255 1265 907	Mylar film 6800pF/50V	CQ93M1H682J(B)
C579,580	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C581,582	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C583~588	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C589	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C591	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C595	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C598	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C601,602	257 0005 944	Ceramic chip 220pF/50V	CC73SL1H221J
C603,604	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C605,606	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C607,608	254 4250 932	Electrolytic 220µF/6.3V	CE04W0J221M
C609,610	255 4199 999	Mylar film 0.024µF/50V	CQ92M1H243J(MRZ)
C611,612	255 1265 907	Mylar film 6800pF/50V	CQ93M1H682J(B)
C613,614	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
C615,616	257 0012 982	Ceramic chip 0.022µF/50V	CK73F1H223Z
C627,628	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C629,930	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C633,634	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
C635~640	257 0012 982	Ceramic chip 0.022µF/50V	CK73F1H223Z

Ref. No.	Part No.	Part Name	Remarks
C641	254 4260 980	Electrolytic 10µF/50V	CE04W1H100M
C642	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C643	254 4260 980	Electrolytic 10µF/50V	CE04W1H100M
C644	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C645,646	254 4260 951	Electrolytic 2.2µF/50V	CE04W1H2R2M
C647,648	257 0005 944	Ceramic chip 220pF/50V	CC73SL1H221J
C651,652	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C655,656	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C657,658	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C661~664	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C665~667	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C671,672	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C703,704	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C705,706	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C709,710	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C711,712	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C717,718	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C719,720	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C723	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C724	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C725,726	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C731,732	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C733,734	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C737,738	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C739,740	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C743,744	257 0012 982	Ceramic chip 0.022µF/50V	CK73F1H223Z
C745,746	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C747	253 1116 908	Ceramic chip 2200pF/50V	CK45B1H222K
C801,802	256 1034 966	Metalized 0.082µF/50V	CF93A1H823J
C803,804	256 1034 982	Metalized 0.12µF/50V	CF93A1H124J
C805,806	254 4193 905	Electrolytic 10µF/16V	CE04W1C100M(SRA)
C811,812	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C813,814	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C820	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C823,824	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C835,836	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C837	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C843	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M

OTHER PARTS GROUP				Q'ty
CW071	205 0942 022	7P connector socket(TUC-P)		1
CW091	205 0885 037	9P connector socket (TUC-P)		1
CW102	205 0885 053	10P connector socket (TUC-P)		1
CW103	205 0986 059	10P connector plug (TKC-A)		1
CW112	205 0885 066	11P connector socket (TUC-P)		1
CW151,152	205 0885 040	15P connector socket (TUC-P)		2
CW154	205 0885 040	15P connector socket (TUC-P)		1
CX103	205 0985 018	10P connector socket(TKC-A)		1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
FB301	235 0106 908	Chip emifil (21A05)		1
FB307~310	235 0049 900	Beads inductor		4
FB321~323	235 0049 900	Beads inductor		3
FB350~358	235 0106 908	Chip emifil (21A05)		9
FB501	235 0049 900	Beads inductor		1
FB503~506	235 0049 900	Beads inductor		4
FB508,509	235 0049 900	Beads inductor		2
FB510~520	235 0106 908	Chip emifil (21A05)		11
FB521~524	235 0049 900	Beads inductor		4
FB526~528	235 0049 900	Beads inductor		3
FB530,531	235 0049 900	Beads inductor		2
FB601	235 0106 908	Chip emifil (21A05)		1
FB603	235 0106 908	Chip emifil (21A05)		1
FB701	235 0106 908	Chip emifil (21A05)		1
JK301	204 8561 004	2P pin jack (NI)		1
JK601,602	204 8543 006	6 P pin jack		2
JK603	204 8540 009	4 P pin jack		1
JK701	204 8543 006	6 P pin jack		1
L301	235 0060 918	Inductor 4.7μH		1
L303	235 0060 905	Inductor 2.2μH		1
L304	235 0070 953	Inductor 68μH		1
L401	235 0060 950	Inductor 10μH		1
L402	235 0049 900	Beads Inductor		1
LF301	261 0152 003	2.88M band pass filter	2.88M BPF(5VLT)	1
X301	399 0402 003	Crystal 18.432 MHz		1
X302	399 0191 903	Ceramic resonator	CST4.00MGW-TF01	1

1U-3006 E. VOL UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	262 2214 007	IC LC7536	
IC103	263 0615 902	IC BA15218F	
IC104	263 0896 909	IC NJM2068MD	
IC105,106	263 0615 902	IC BA15218F	
IC107,108	262 2214 007	IC LC7536	
IC109,110	263 0615 902	IC BA15218F	
TR171,172	275 0075 901	FET 2SK209-Y/GR	
TR173	269 0055 900	Transistor DTA144EK	
TR174	269 0054 901	Transistor DTC144EK	
TR175	275 0075 901	FET 2SK209-Y/GR	
D171~173	276 0438 910	Diode MA151A	
RESISTORS GROUP			
R111,112	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R113,114	247 0013 984	Carbon chip 470kohm 1/10W	RM73B--474J
R115,116	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R117,118	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R119,120	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R121,122	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R123~126	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R127,128	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R129,130	247 0010 961	Carbon chip 22kohm 1/10W	RM73B--223J
R131,132	247 0013 900	Carbon chip 220kohm 1/10W	RM73B--224J
R133,134	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R135,136	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R137,138	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R139,140	247 0007 916	Carbon chip 750ohm 1/10W	RM73B--751J
R141	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R142	247 0009 943	Carbon chip 6.8kohm 1/10W	RM73B--682J
R143	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R144	247 0006 962	Carbon chip 470ohm 1/10W	RM73B--471J
R145,146	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R147,148	247 0010 961	Carbon chip 22kohm 1/10W	RM73B--223J
R149,150	247 0013 900	Carbon chip 220kohm 1/10W	RM73B--224J
R151,152	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R153,154	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R155,156	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R157,158	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R159,160	247 0007 916	Carbon chip 750ohm 1/10W	RM73B--751J
R161,162	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R163,164	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R165,166	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R167,168	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R171,172	247 0006 920	Carbon chip 330ohm 1/10W	RM73B--331J
R173	247 0009 943	Carbon chip 6.8kohm 1/10W	RM73B--682J
R174~177	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J

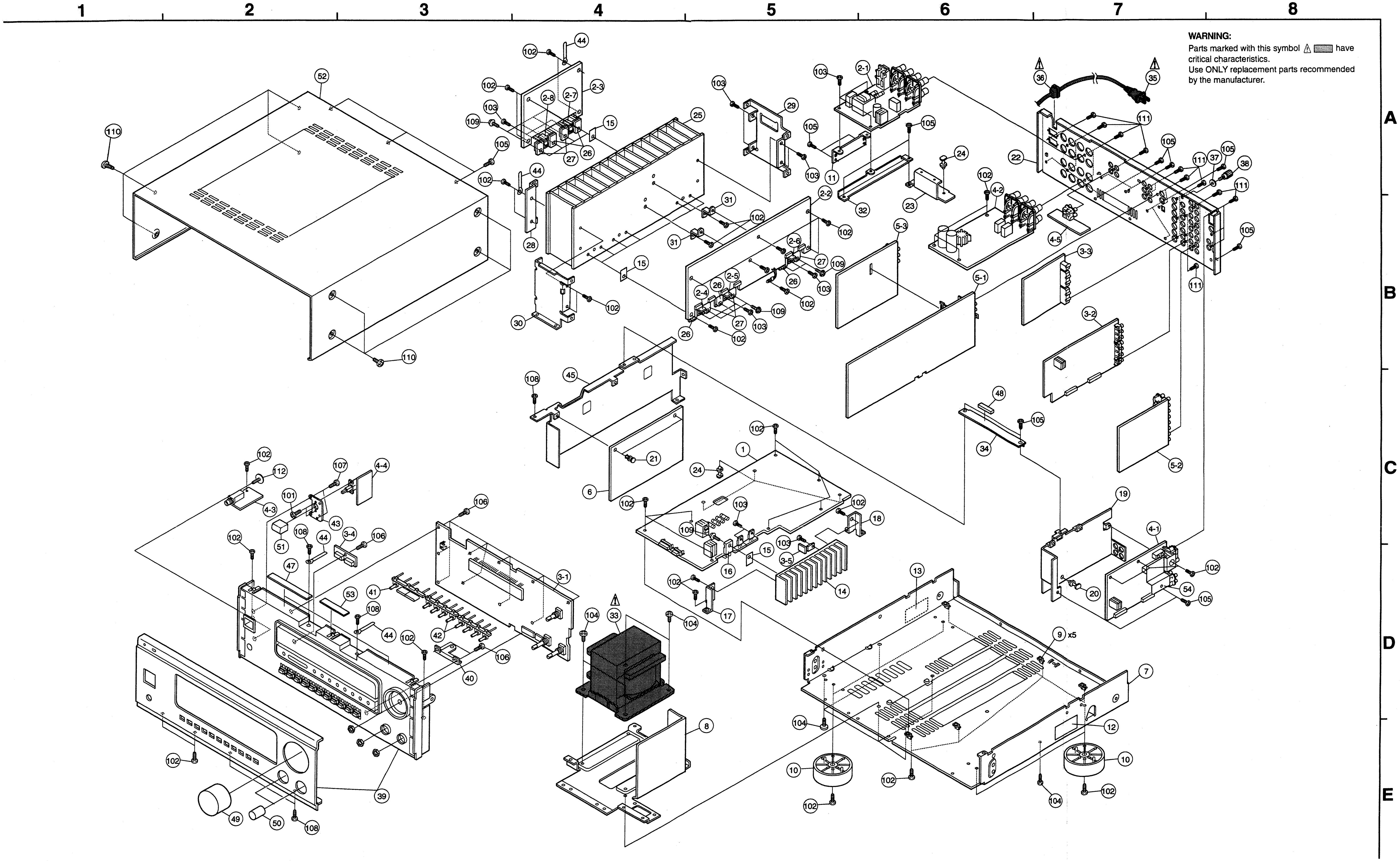
Ref. No.	Part No.	Part Name	Remarks	
CAPACITORS GROUP				
C103,104	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M	
C105,106	254 4254 938	Electrolytic 47μF/16V	CE04W1C470M	
C107,108	257 0012 982	Ceramic chip 0.022μF/50V	CK73F1H223Z	
C109~112	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M	
C114	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z	
C115,116	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M	
C117,118	254 4254 912	Electrolytic 22μF/16V	CE04W1C220M	
C119,120	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J	
C121,122	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M	
C123,124	257 0012 982	Ceramic chip 0.022μF/50V	CK73F1H223Z	
C125,126	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M	
C127,128	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M	
C131,132	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M	
C134	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z	
C135,136	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M	
C137,138	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M	
C141,142	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J	
C143,144	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M	
C145,146	257 0012 982	Ceramic chip 0.022μF/50V	CK73F1H223Z	
C147,148	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M	
C149,150	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M	
C153,154	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M	
C156	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z	
C157,158	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M	
C159,160	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M	
C163,164	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J	
C171,172	256 1034 953	Metalized 0.068μF/50V	CF93A1H683J	
C173	255 1265 923	Mylar film 8200pF/50V	CQ93M1H822J(B)	
OTHER PARTS GROUP				**Q'ty**
CW104	205 0885 053	10P connector socket (TUC-P)		1
CW144	205 0885 011	14P connector socket (TUC-P)		1
CX054	205 0343 058	5P connector base(KR-PH)		1
CY072	205 0343 074	7P connector base(KR-PH)		1
ST101	205 0452 017	Style pin		1
W702	205 1005 007	1P terminal		1

PARTS LIST OF EXPLODED VIEW

Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	1U-2994	Main P.W.B. unit ass'y		1
2	1U-2995	Power amp. P.W.B. unit ass'y		1
2-1	1U-2995-1	Power supply-1 P.W.B. unit		
2-2	1U-2995-2	Front amp. P.W.B. unit		
2-3	1U-2995-3	Surround amp. P.W.B. unit		
2-4	1U-2995-4	Reg.-1 P.W.B. unit		
2-5	1U-2995-5	Reg.-2 P.W.B. unit		
2-6	1U-2995-6	Reg.-3 P.W.B. unit		
2-7	1U-2995-7	Reg.-4 P.W.B. unit		
2-8	1U-2995-8	Reg.-5 P.W.B. unit		
3	1U-2996	Video & display P.W.B. unit ass'y		1
3-1	1U-2996-1	Display P.W.B. unit		
3-2	1U-2996-2	C-video P.W.B. unit		
3-3	1U-2996-3	S-video P.W.B. unit		
3-4	1U-2996-4	LED P.W.B. unit		
3-5	1U-2996-5	Reg. P.W.B. unit		
4	1U-2997	Tuner P.W.B. unit ass'y		1
4-1	1U-2997-1	Tuner P.W.B. unit		
4-2	1U-2997-2	Power supplay-2 P.W.B. unit		
4-3	1U-2997-3	H/P P.W.B. unit		
4-4	1U-2997-4	Power switch P.W.B. unit		
4-5	1U-2997-5	Pre out P.W.B. unit		
5	1U-2998	Audio & DSP P.W.B. unit ass'y		1
5-1	1U-2998-1	DSP P.W.B. unit		
5-2	1U-2998-2	Audio in P.W.B. unit		
5-3	1U-2998-3	6ch. external in P.W.B. unit		
6	1U-3006	E.vol. P.W.B. unit ass'y		1
7	411 1358 304	Main chassis		1
8	412 4204 209	Trans. bracket		1
9	412 4210 002	Bracket		5
10	104 0194 205	Foot ass'y		4
11	412 4205 004	PWB bracket (A)		1
12	513 2706 002	Caution label	R	1
13	513 2706 015	Caution label	L	1
14	417 0546 209	Radiator		1
15	415 0234 007	Insulating sheet		11
16	271 0276 009	Transistor 2SA1633F31(E/F)		1
17	412 4207 002	Radiator bracket (A)		1
18	412 4208 001	Radiator bracket (B)		1
19	412 4259 005	Tuner bracket		1
20	412 2814 044	Card spacer (L=6)		1
21	477 0288 006	Push rivet		2
22	105 1225 202	Back panel		1
23	412 4203 006	Radiator support (R)		1
24	412 2814 028	Card spacer (L=10)		4
25	417 0544 308	Power radiator		1
26	273 0389 031	Transistor 2SC3855 LB (O/P/Y)(Z)		5
27	271 0240 035	Transistor 2SA1491 LB (O/P/Y)(Z)		5
28	412 4247 004	PWB bracket (C)		1
29	412 4212 107	Radiator bracket (R)		1
30	412 4211 108	Radiator bracket (F)		1
31	412 4248 003	PWB bracket (D)		2
32	412 4201 105	PWB bracket		1
⚠ 33	233 6220 002	Power trans. (EU/EC)		1
34	412 4209 301	PWB support		1
⚠ 35	206 2060 002	AC cord (POLARIZED)		1
⚠ 36	445 0056 008	Cord bush		1

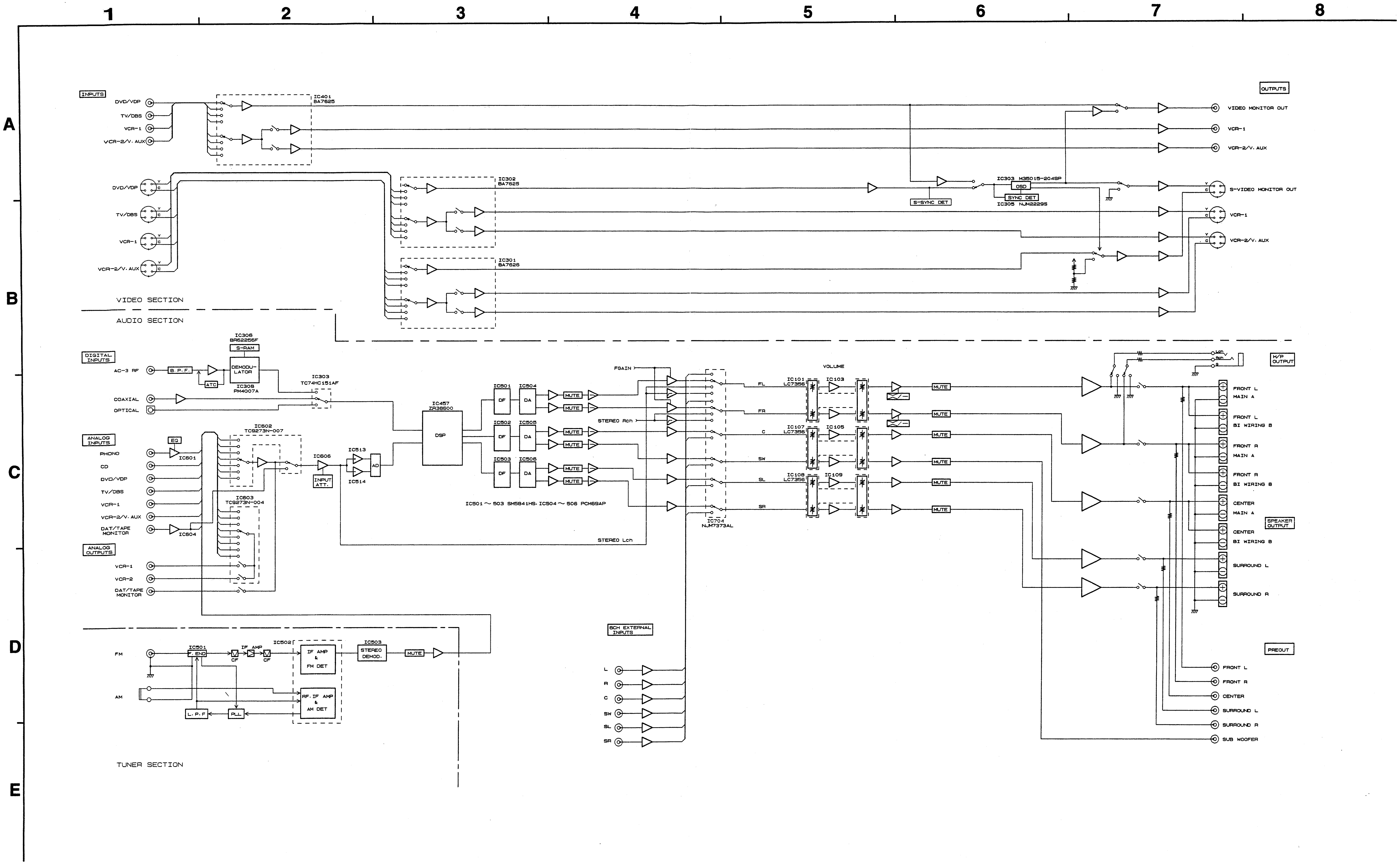
Ref. No.	Part No.	Part Name	Remarks	Q'ty
37	477 0018 001	Washer (P-87)		1
38	205 0071 016	Terminal ass'y		1
39	146 1669 306	Inner panel ass'y		1
40	412 4249 002	PWB bracket (E)		1
41	113 1804 006	Tuning knob		1
42	113 1805 005	Function knob		2
43	412 4163 007	Switch bracket		1
44	445 0048 003	Cord holder (L76)		4
45	411 1365 106	Shield plate		1
46	445 8004 007	Wire clamper		10
47	461 0386 068	Rubber sheet		2
48	461 9001 001	Rubber sheet	30X8X5	1
49	112 0744 038	VR. knob ass'y		1
50	112 0685 100	Knob (MARU)		2
51	113 9213 000	P· knob (P) ass'y		1
52	102 0583 001	Top cover		1
53	461 0386 071	Rubber sheet		1
54	414 0819 005	Earth plate		1
SCREWS				
101	471 3303 016	Screw 3X6 CBS-Z		2
102	473 7002 018	Screw 3X8 CBTS(S)-Z		45
103	473 7005 002	Screw 3X10 CBTS(S)-Z		8
104	473 7004 016	Screw 4X6 CBTS(S)-Z		10
105	473 7015 018	Screw 3X8 CBTS(S)-B		18
106	473 7500 015	Screw 3X8 CBTS(P)-Z		12
107	473 7505 007	Screw 2.6X8 CBTS(P)-Z		2
108	473 7508 017	Screw 3X10 CBTS(P)-B		5
109	473 8007 009	Cup screw 3X12		11
110	473 8063 014	Screw 4X8 CBTS (B)-B		6
111	477 0064 107	Fixing screw		23
112	477 0262 006	Special screw		1
PACKING & ACCESORIES (Not included EXPLODED VIEW)				
151	505 8092 007	Laminate envelope		1
152	503 1236 000	Cushion		1
153	505 8006 019	Envelope		1
154	511 3081 005	Instruction manual		1
155	231 0922 009	Loop antenna		1
156	395 0023 008	FM ant. ass'y		1
157	399 0355 008	Remocon RC-825		1
158		Battery		2
159	515 0671 504	S.S. list (EX)		1
160	529 0079 008	FM ant. adapter		1
161	501 1954 001	Carton case		1
162	513 1389 006	Control card base		1
163	513 1349 004	Thermal carbon film		1
164	515 0690 103	DEL warranty home		1
165	517 0107 087	UPC label		1

EXPLODED VIEW OF CHASSIS AND CABINET

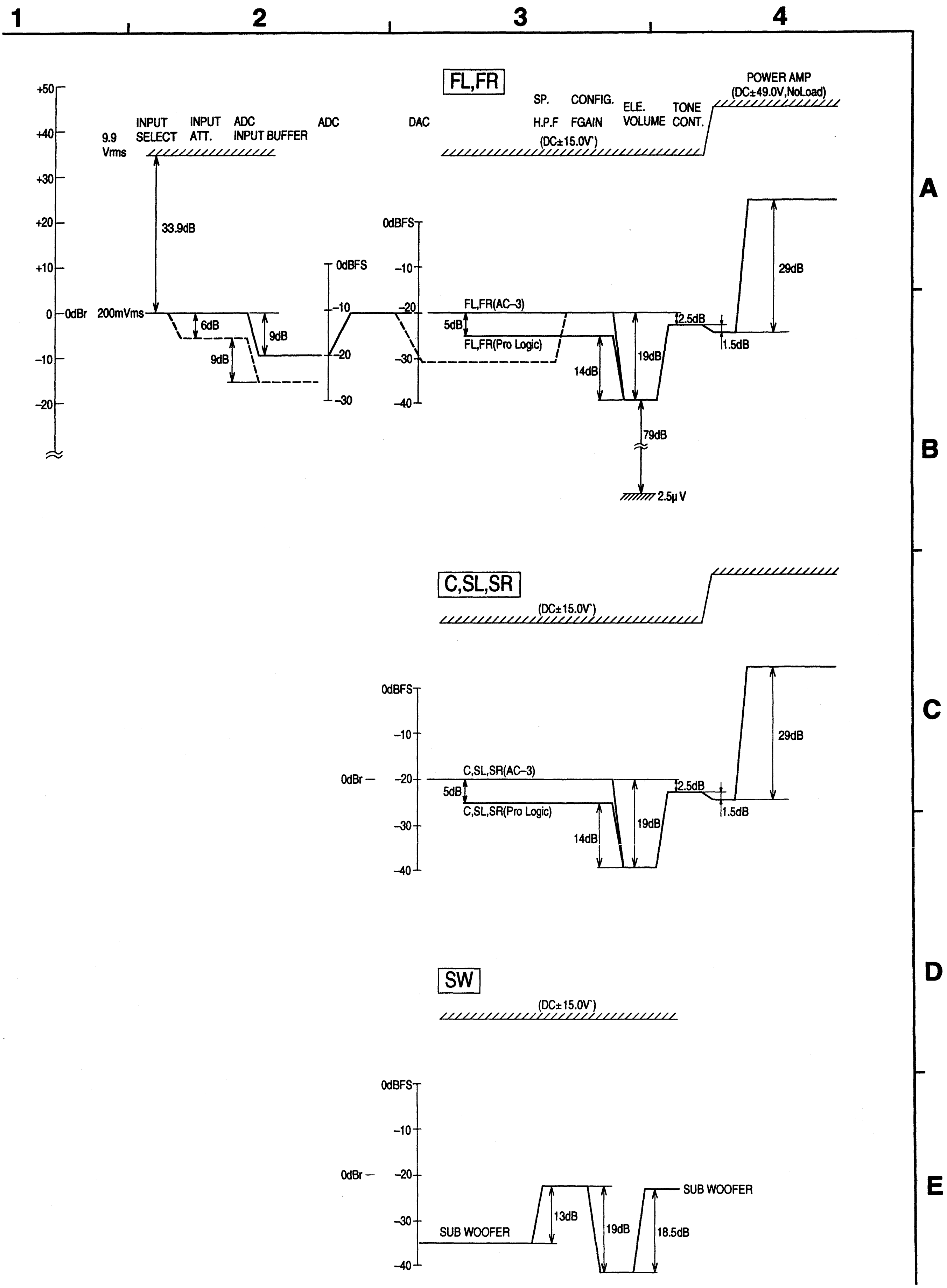

1
2
3
4
5
6
7
8
A
B
C
D
E
44
102
2-3
2-8
2-7
103
109
15
27
26
105
28
25
52
110
29
11
2-1
24
32
23
2-2
31
30
2-6
2-5
2-4
36
35
111
22
37
38
4-2
4-5
3-3
5-3
5-1
3-2
48
34
5-2
108
45
6
21
1
18
3-5
16
14
17
19
4-1
20
54
13
9 x5
7
12
10
104
33
8
112
107
4-4
101
4-3
43
51
3-4
106
47
3-1
53
41
42
40
39
49
50

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

BLOCK DIAGRAM

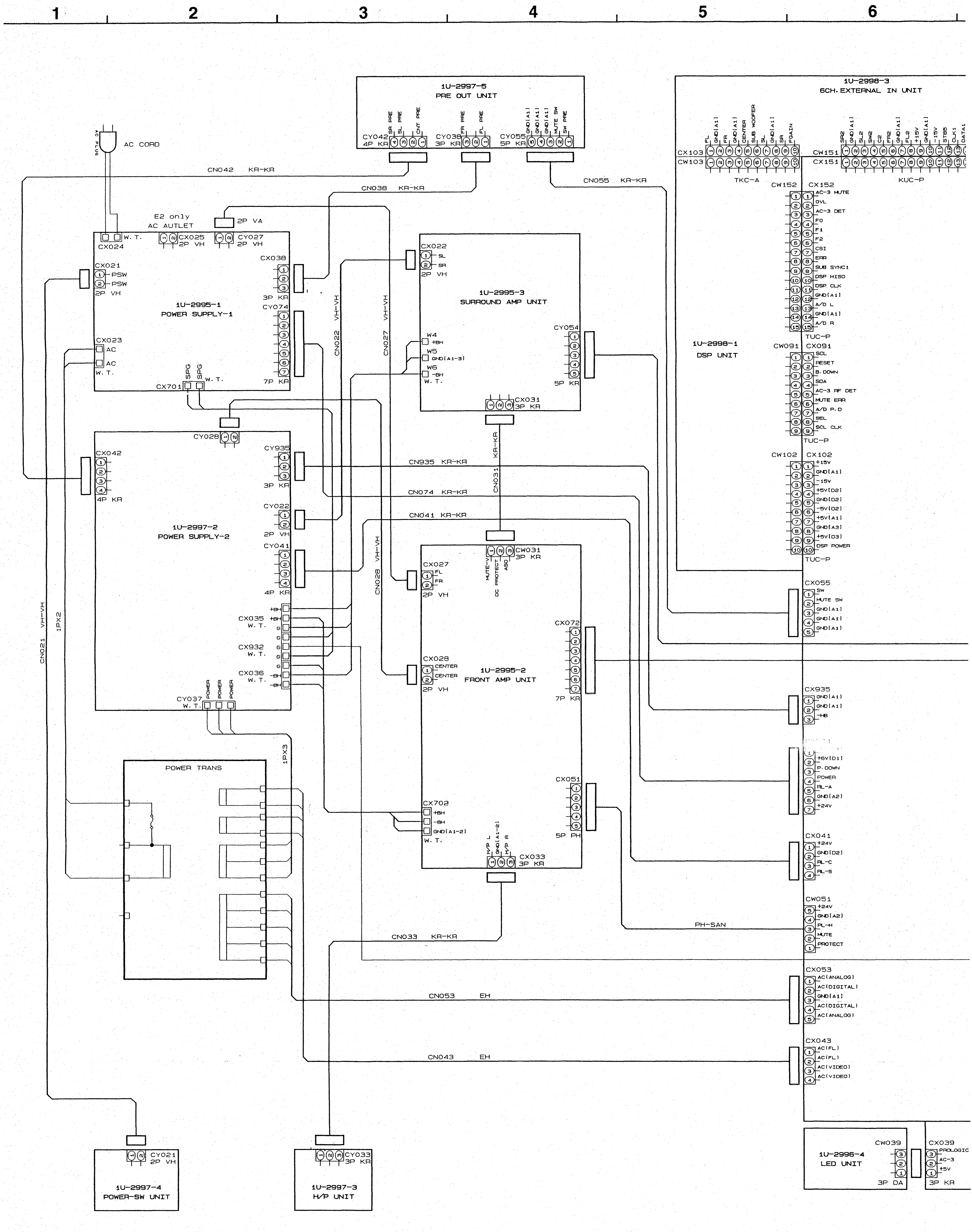

1
2
3
4
5
6
7
8
A
B
C
D
E
INPUTS
DVD/VDP
TV/DBS
VCR-1
VCR-2/V. AUX
IC401
BA7625
Y
C
IC302
BA7625
IC301
BA7626
S-SYNC DET
IC303 M35015-204SP
OSD
SYNC DET
IC305 NJM2229S
OUTPUTS
VIDEO MONITOR OUT
VCR-1
VCR-2/V. AUX
S-VIDEO MONITOR OUT
VCR-1
VCR-2/V. AUX
VIDEO SECTION
AUDIO SECTION
IC306
BR62256F
S-RAM
DIGITAL INPUTS
AC-3 RF
B. P. F.
ATC
DEMODU-LATOR
IC308
PM4007A
IC303
TC74HC151AF
COAXIAL
OPTICAL
ANALOG INPUTS
EQ
PHONO
IC601
CD
DVD/VDP
TV/DBS
VCR-1
VCR-2/V. AUX
DAT/TAPE MONITOR
IC604
IC602
TC9273N-007
IC603
TC9273N-004
ANALOG OUTPUTS
VCR-1
VCR-2
DAT/TAPE MONITOR
IC606
INPUT ATT.
IC513
IC514
AD
IC457
ZR38500
DSP
IC501
IC504
DF
DA
MUTE
IC502
IC505
IC503
IC506
IC501 ~ 503 SM5841HS. IC504 ~ 506 PCM69AP
FGAIN
STEREO Rch
STEREO Lch
IC704
NJM7373AL
FL
FR
C
SW
SL
SR
VOLUME
IC101
LC7356
IC103
IC107
LC7356
IC105
IC108
LC7356
IC109
MUTE
Lch
Rch
G
H/P OUTPUT
FRONT L
MAIN A
FRONT L
BI WIRING B
FRONT R
MAIN A
FRONT R
BI WIRING B
CENTER
MAIN A
CENTER
BI WIRING B
SPEAKER OUTPUT
SURROUND L
SURROUND R
PREOUT
FRONT L
FRONT R
CENTER
SURROUND L
SURROUND R
SUB WOOFER
6CH EXTERNAL INPUTS
L
R
C
SW
SL
SR
FM
IC501
F. END
IF AMP
CF
CF
IC502
IF AMP & FM DET
IC503
STEREO DEMOD.
MUTE
AM
RF. IF AMP & AM DET
L. P. F
PLL
TUNER SECTION

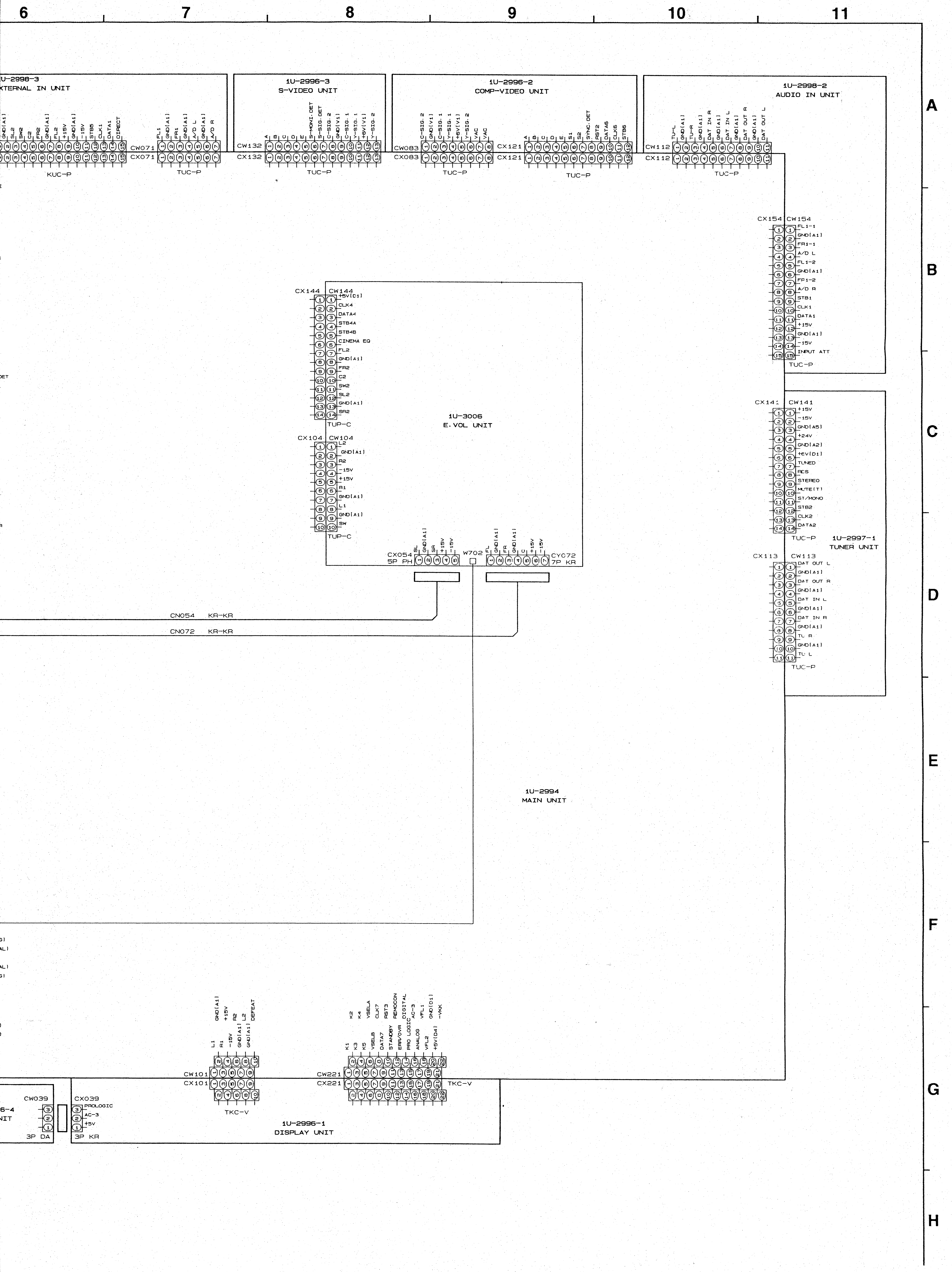
BLOCK LEVEL DIAGRAM


1
2
3
4
A
B
C
D
E
FL,FR
+50
+40
+30
+20
+10
0
-10
-20
0dBr
9.9 Vrms
200mVms
INPUT SELECT
INPUT ATT.
ADC INPUT BUFFER
ADC
DAC
SP. H.P.F
CONFIG. FGAIN
ELE. VOLUME
TONE CONT.
(DC±15.0V)
POWER AMP (DC±49.0V,NoLoad)
33.9dB
6dB
9dB
9dB
0dBFS
-10
-20
-30
0dBFS
-10
-20
-30
-40
FL,FR(AC-3)
FL,FR(Pro Logic)
5dB
14dB
19dB
2.5dB
1.5dB
29dB
79dB
2.5μV
C,SL,SR
(DC±15.0V)
0dBFS
-10
0dBr
-20
-30
-40
C,SL,SR(AC-3)
C,SL,SR(Pro Logic)
5dB
14dB
19dB
2.5dB
1.5dB
29dB
SW
(DC±15.0V)
0dBFS
-10
0dBr
-20
-30
-40
SUB WOOFER
13dB
19dB
18.5dB
SUB WOOFER

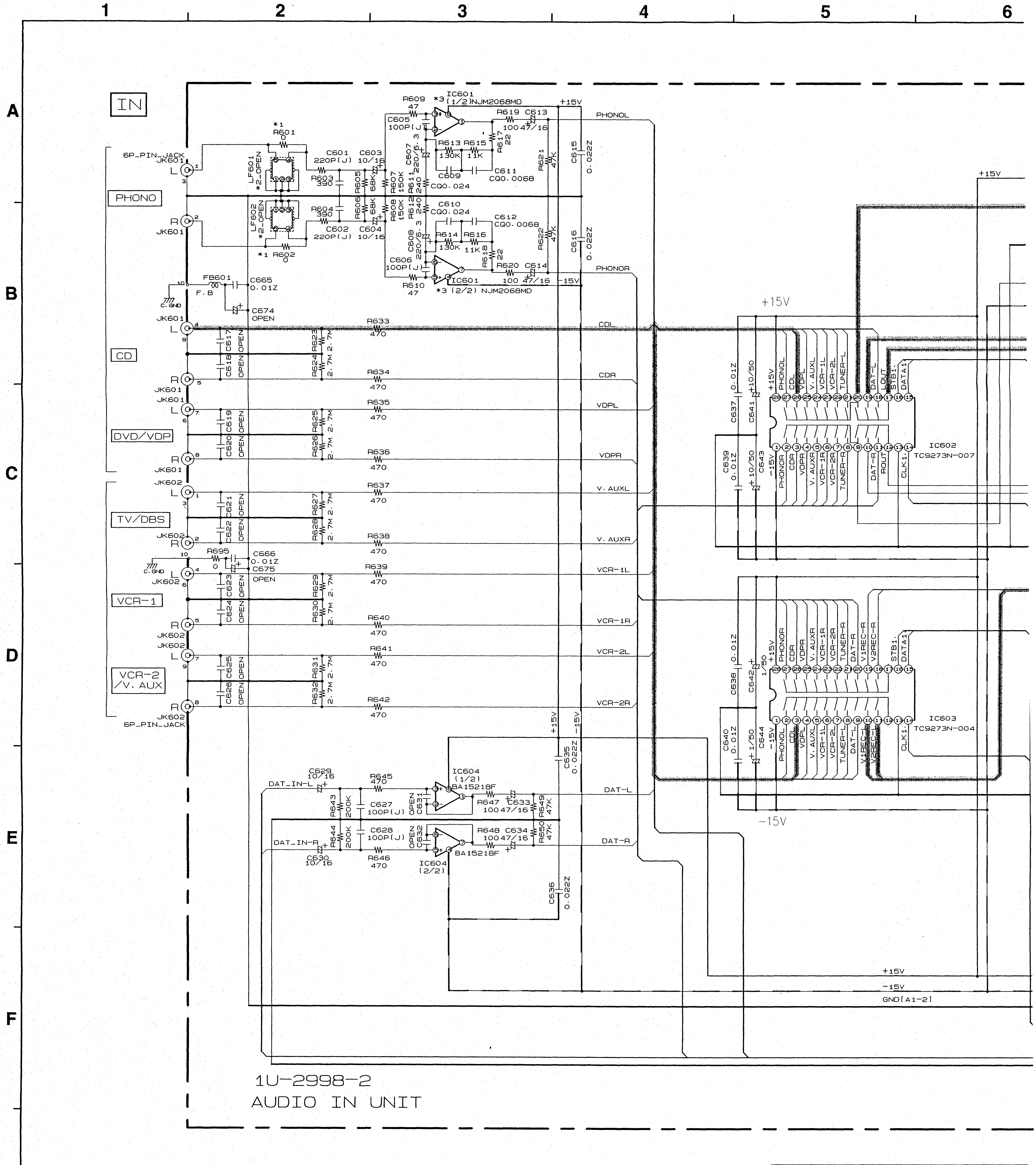
MEMO:

WIRING DIAGRAM


1
2
3
4
5
6
1U-2997-5
PRE OUT UNIT
CY042 4P KR
SR PRE
SL PRE
CNT PRE
CY038 3P KR
FR PRE
FL PRE
CY055 5P KR
GND(A1)
GND(A1)
GND(A1)
MUTE SW
SW PRE
AC PLUG
AC CORD
CN042 KR-KR
CN038 KR-KR
CN055 KR-KR
E2 only
AC AUTLET
2P VA
W. T.
CX024
CX025 2P VH
CY027 2P VH
CX038
3P KR
CX021
PSW
PSW
2P VH
1U-2995-1
POWER SUPPLY-1
CY074
7P KR
CX023
AC
AC
W. T.
SPG
SPG
W. T.
CX701
CN022 VH-VH
CN027 VH-VH
CX022
SL
SR
2P VH
1U-2995-3
SURROUND AMP UNIT
CY054
5P KR
W4
+BH
W5
GND(A1-3)
W6
-BH
W. T.
CX031 3P KR
KR-KR
CN031
CY028
CX042
4P KR
CY935
3P KR
CN935 KR-KR
CN074 KR-KR
CN041 KR-KR
CY022
2P VH
1U-2997-2
POWER SUPPLY-2
CY041
4P KR
VH-VH
CN028
+BH
+BH
G
G
G
G
G
-BH
-BH
CX035 W. T.
CX932 W. T.
CX036 W. T.
CY037 W. T.
POWER
POWER
POWER
CN021 VH-VH
1PX2
1PX3
POWER TRANS
CW031 3P KR
MUTE-V
DC PROTECT
ASO
CX027
FL
FR
2P VH
CX028
CENTER
CENTER
2P VH
1U-2995-2
FRONT AMP UNIT
CX072
7P KR
CX051
5P PH
CX702
+BH
-BH
GND(A1-2)
W. T.
H/P L
GND(A1-2)
H/P R
CX033 3P KR
CN033 KR-KR
PH-SAN
CN053 EH
CN043 EH
1U-2998-3
6CH. EXTERNAL IN UNIT
FL
GND(A1)
FR
GND(A1)
CENTER
SUB WOOFER
SL
GND(A1)
SR
FGAIN
CX103
CW103
TKC-A
SR2
GND(A1)
SL2
SW2
C2
FR2
GND(A1)
FL2
+15V
GND(A1)
-15V
STB5
CLK1
DATA1
CW151
CX151
KUC-P
CW152
CX152
AC-3 MUTE
OVL
AC-3 DET
F0
F1
F2
CSI
ERR
SUB SYNC1
DSP MISO
DSP CLK
GND(A1)
A/D L
GND(A1)
A/D R
TUC-P
1U-2998-1
DSP UNIT
CW091
CX091
SCL
RESET
B. DOWN
SDA
AC-3 RF DET
MUTE ERR
A/D P.D
SEL
SCL CLK
TUC-P
CW102
CX102
+15V
GND(A1)
-15V
+5V(D2)
GND(D2)
-5V(D2)
+5V(A1)
GND(A3)
+5V(D3)
DSP POWER
TUC-P
CX055
SW
MUTE SW
GND(A1)
GND(A1)
GND(A1)
CX935
GND(A1)
GND(A1)
-HB
+6V(D1)
P. DOWN
POWER
RL-A
GND(A2)
+24V
CX041
+24V
GND(D2)
RL-C
RL-S
CW051
+24V
GND(A2)
RL-H
MUTE
PROTECT
CX053
AC(ANALOG)
AC(DIGITAL)
GND(A1)
AC(DIGITAL)
AC(ANALOG)
CX043
AC(FL)
AC(FL)
AC(VIDEO)
AC(VIDEO)
CY021 2P VH
1U-2997-4
POWER-SW UNIT
CY033 3P KR
1U-2997-3
H/P UNIT
1U-2996-4
LED UNIT
CW039
3P DA
CX039
PROLOGIC
AC-3
+5V
3P KR


6
7
8
9
10
11
A
B
C
D
E
F
G
H
1U-2998-3
XTERNAL IN UNIT
GND(A1) SL2 SW2 C2 FR2 GND(A1) FL2 +15V GND(A1) -15V STB5 CLK1 DATA1 DIRECT
CW071 CX071
KUC-P
FL1 GND(A1) FR1 GND(A1) A/D L GND(A1) A/D R
TUC-P
1U-2996-3
S-VIDEO UNIT
A B C D E S-MONI.DET S-SIG.DET C-SIG.2 GND(V1) C-SIG.1 Y-SIG.1 +5V(V1) Y-SIG.2
CW132 CX132
TUC-P
1U-2996-2
COMP-VIDEO UNIT
C-SIG.2 GND(V1) C-SIG.1 Y-SIG.1 +5V(V1) Y-SIG.2 VAC VAC
CW083 CX083
TUC-P
A B C D E S1 S2 SYNC.DET RST2 DATA5 CLK5 STB5
CX121
TUC-P
1U-2998-2
AUDIO IN UNIT
TU-L GND(A1) TU-R GND(A1) DAT IN R GND(A1) DAT IN L GND(A1) DAT OUT R GND(A1) DAT OUT L
CW112 CX112
TUC-P
CX154 CW154
FL1-1 GND(A1) FR1-1 A/D L FL1-2 GND(A1) FR1-2 A/D R STB1 CLK1 DATA1 +15V GND(A1) -15V INPUT ATT
TUC-P
CX144 CW144
+5V(D1) CLK4 DATA4 STB4A STB4B CINEMA EQ FL2 GND(A1) FR2 C2 SW2 SL2 GND(A1) SR2
TUP-C
CX104 CW104
L2 GND(A1) R2 -15V +15V R1 GND(A1) L1 GND(A1) SW
TUP-C
1U-3006
E.VOL UNIT
CX054 5P PH
SL GND(A1) SR +15V -15V
W702
FL GND(A1) FR GND(A1) C +15V -15V
CY072 7P KR
CN054 KR-KR
CN072 KR-KR
CX141 CW141
+15V -15V GND(A5) +24V GND(A2) +6V(D1) TUNED RDS STEREO MUTE(T) ST/MONO STB2 CLK2 DATA2
TUC-P
1U-2997-1
TUNER UNIT
CX113 CW113
DAT OUT L GND(A1) DAT OUT R GND(A1) DAT IN L GND(A1) DAT IN R GND(A1) TU R GND(A1) TU L
TUC-P
1U-2994
MAIN UNIT
L1 R1 -15V GND(A1) +15V R2 GND(A1) L2 GND(A1) DEFEAT
CW101 CX101
TKC-V
K1 K2 K3 K4 K5 VSELA VSELB CLK7 DATA7 RST3 STANDBY REMOCON EPR/DVR DIGITAL PRO LOGIC AC-3 ANALOG VFL1 VFL2 GND(D1) +5V(D4) -VKK
CW221 CX221
TKC-V
CW039
6-4
NIT
3P DA
CX039
PROLOGIC AC-3 +5V
3P KR
1U-2996-1
DISPLAY UNIT

SCHEMATIC DIAGRAM (1/11)


1
2
3
4
5
6
A
B
C
D
E
F
IN
PHONO
CD
DVD/VDP
TV/DBS
VCR-1
VCR-2 /V. AUX
6P_PIN_JACK JK601
JK602
IC601 *3 (1/2) NJM2068MD
IC601 *3 (2/2) NJM2068MD
LF601 *2_OPEN
LF602 *2_OPEN
*1 R601 0
*1 R602 0
FB601 F.B
C.GND
+15V
-15V
PHONOL
PHONOR
CDL
CDR
VDPL
VDPR
V. AUXL
V. AUXR
VCR-1L
VCR-1R
VCR-2L
VCR-2R
DAT_IN-L
DAT_IN-R
DAT-L
DAT-R
IC604 (1/2) BA15218F
IC604 (2/2) BA15218F
IC602 TC9273N-007
IC603 TC9273N-004
STB1
DATA1
CLK1
GND[A1-2]
1U-2998-2
AUDIO IN UNIT

NOTES

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

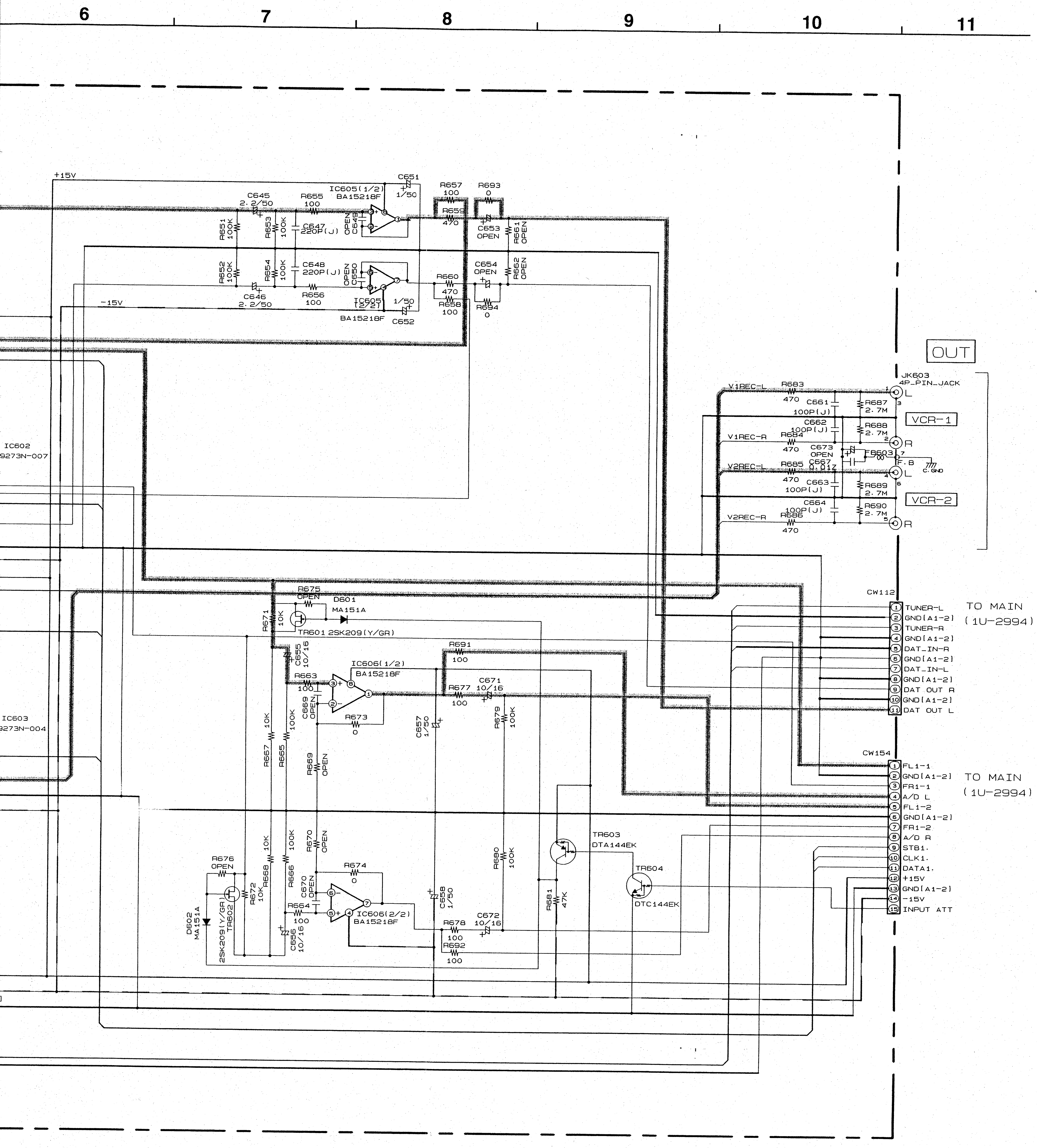
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

	*1 R601, 602	*2 LF601, 602	*3 IC601
* USA CANADA	0	---	NJM2068MD
ASIA	1.3K	L.P.F	NJM2068MD
EUROPE	1.3K	L.P.F	NJM2068MD
JAPAN	0	---	NJM2068MD


6
7
8
9
10
11
+15V
-15V
C645 2.2/50
R655 100
IC605(1/2) BA15218F
C651 1/50
R657 100
R693 0
R659 470
C653 OPEN
R661 OPEN
R651 100K
R653 100K
C647 220P(J)
C649 OPEN
R652 100K
R654 100K
C648 220P(J)
C650 OPEN
C646 2.2/50
R656 100
IC605(2/2) BA15218F
C652 1/50
C654 OPEN
R662 OPEN
R660 470
R658 100
R694 0
IC602
9273N-007
IC603
9273N-004
OUT
JK603 4P_PIN_JACK
V1REC-L
R683 470
C661 100P(J)
R687 2.7M
L
C662 100P(J)
R688 2.7M
VCR-1
V1REC-R
R684 470
R
C673 OPEN
C667 0.01Z
FB603
F.B
C.GND
V2REC-L
R685 470
C663 100P(J)
R689 2.7M
VCR-2
C664 100P(J)
R690 2.7M
V2REC-R
R686 470
R675 OPEN
D601 MA151A
R671 10K
TR601 2SK209(Y/GR)
C655 10/16
R691 100
IC606(1/2) BA15218F
R663 100
C671 10/16
R677 100
C669 OPEN
R673 0
C657 1/50
R679 100K
R667 10K
R665 100K
R659 OPEN
R670 OPEN
R668 10K
R666 100K
R676 OPEN
R672 10K
TR602 2SK209(Y/GR)
D602 MA151A
R674 0
C670 OPEN
R664 100
IC606(2/2) BA15218F
C656 10/16
C658 1/50
R678 100
C672 10/16
R692 100
R680 100K
R681 47K
TR603 DTA144EK
TR604 DTC144EK
CW112
① TUNER-L
② GND[A1-2]
③ TUNER-R
④ GND[A1-2]
⑤ DAT_IN-R
⑥ GND[A1-2]
⑦ DAT_IN-L
⑧ GND[A1-2]
⑨ DAT OUT R
⑩ GND[A1-2]
⑪ DAT OUT L
TO MAIN (1U-2994)
CW154
① FL1-1
② GND[A1-2]
③ FR1-1
④ A/D L
⑤ FL1-2
⑥ GND[A1-2]
⑦ FR1-2
⑧ A/D R
⑨ STB1.
⑩ CLK1.
⑪ DATA1.
⑫ +15V
⑬ GND[A1-2]
⑭ -15V
⑮ INPUT ATT
TO MAIN (1U-2994)

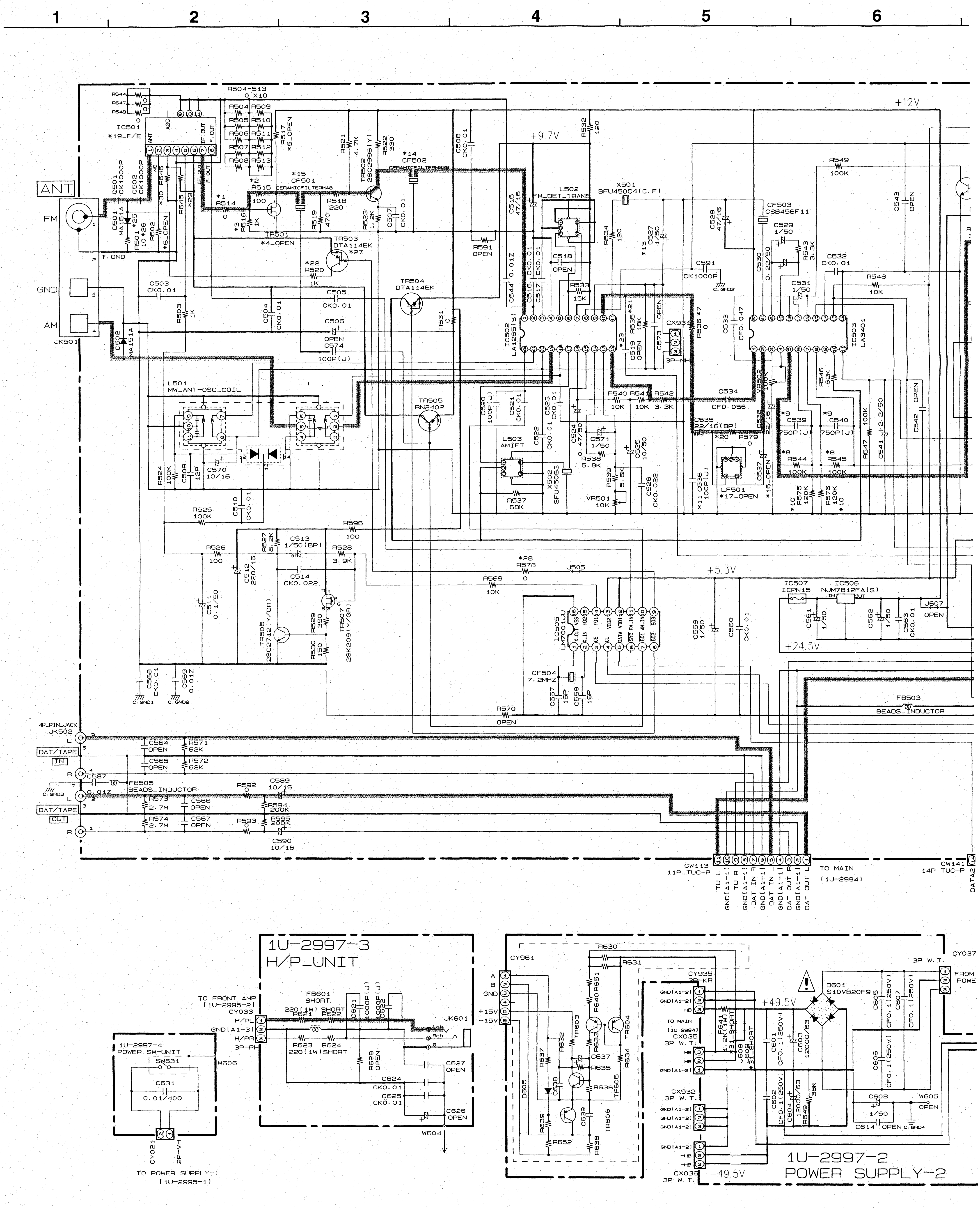
602	*3 IC601
	NJM2068MD
. F	NJM2068MD
. F	NJM2068MD
	NJM2068MD

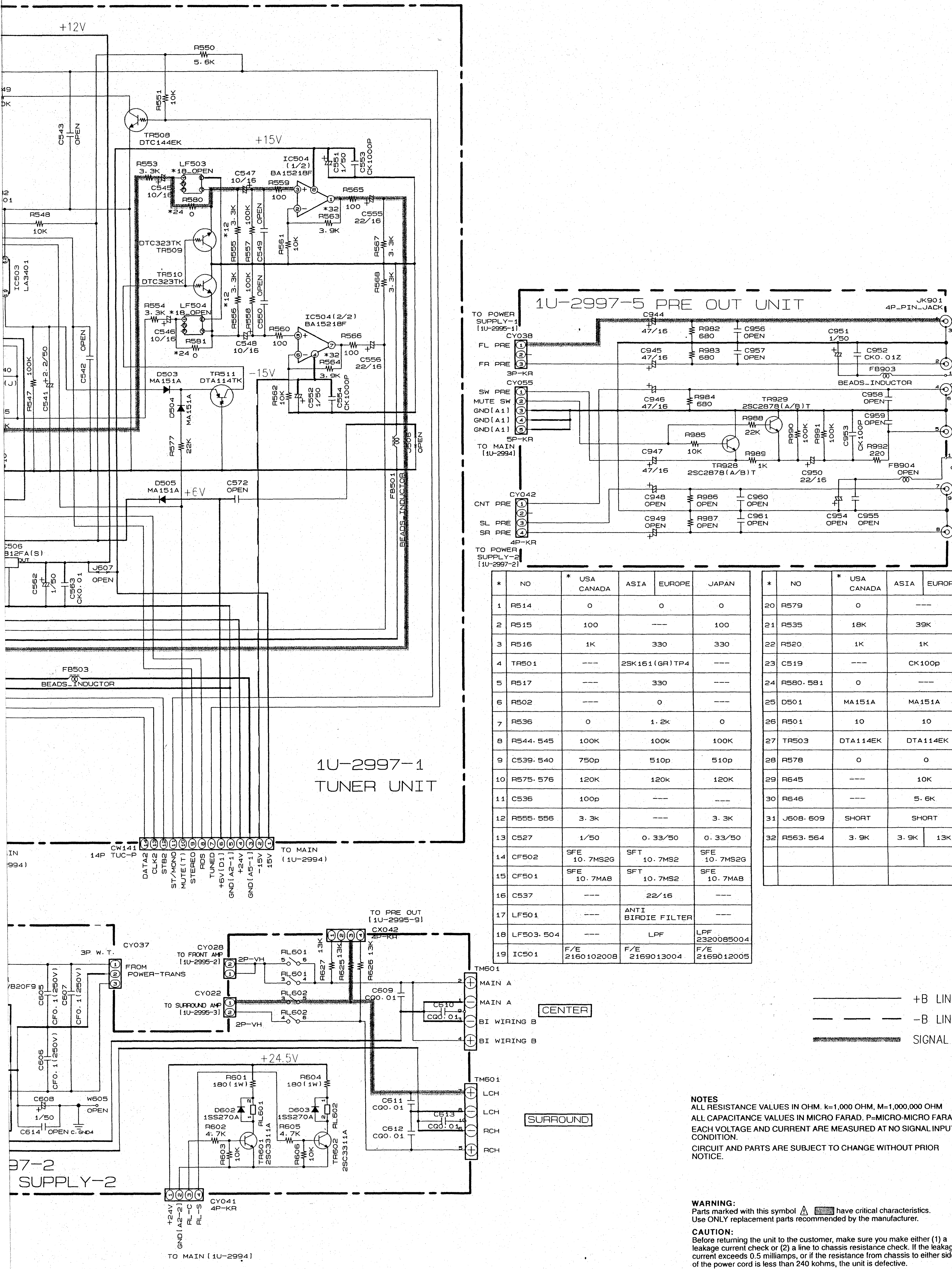
——— +B LINE

— — — -B LINE

▨▨▨ SIGNAL LINE

SCHEMATIC DIAGRAM (2/11)


1
2
3
4
5
6
ANT
FM
GND
AM
JK501
IC501
*19_F/E
R504~513
0 X10
R644
R647
R648
D501
MA151A
D502
MA151A
C501
CK1000P
C502
CK1000P
C503
CK0.01
R503
1K
R514
R515
100
R516
1K
TR501
*4_OPEN
TR502
2SC2996(Y)
TR503
DTA114EK
TR504
DTA114EK
TR505
RN2402
*15
CF501
CERAMICFILTERMAB
*14
CF502
CERAMICFILTERMS2G
R518
220
R519
470
R520
1K
R521
4.7K
R522
330
R523
1.5K
C504
CK0.01
C505
CK0.01
C506
OPEN
C574
100P(J)
C507
CK0.01
C508
CK0.01
R591
OPEN
R531
+9.7V
+12V
R532
120
C515
47/16
L502
FM_DET_TRANS
X501
BFU450C4(C.F)
R534
120
C527
1/50
C528
47/16
CF503
CSB456F11
C529
1/50
R543
3.3K
R549
100K
C543
OPEN
C532
CK0.01
R548
10K
C531
1/50
C591
CK1000P
C530
0.22/50
IC502
LA1265(S)
IC503
LA3401
C544
0.01Z
C516
CK0.01
C517
CK0.01
C518
OPEN
R533
15K
R535
18K
C573
OPEN
CX931
3P-NH
R536
0
C533
CF0.047
C519
OPEN
R540
10K
R541
10K
R542
3.3K
C534
CF0.056
VR502
100K
C535
22/16(BP)
R579
0
C538
22/16
R546
62K
C539
750P(J)
C540
750P(J)
R544
100K
R545
100K
R547
100K
C541
2.2/50
C542
OPEN
L501
MW_ANT-OSC_COIL
C520
100P(J)
C521
CK0.01
C523
CK0.01
C522
CK0.01
L503
AMIFT
C524
0.47/50
C571
1/50
R538
6.8K
C525
10/50
R539
5.6K
VR501
10K
C526
CK0.022
X502
SFU450B3
R537
68K
C536
100P(J)
LF501
*17_OPEN
C537
*16_OPEN
R575
120K
R576
120K
R524
100K
C509
12P
C570
10/16
R525
100K
C510
CK0.01
R596
100
R526
100
R527
8.2K
C513
1/50(BP)
R528
3.9K
C512
220/16
C514
CK0.022
C511
0.1/50
TR506
2SC2712(Y/GR)
TR507
2SK209(Y/GR)
R529
330
R530
150
R569
10K
*28
R578
0
J505
+5.3V
IC505
LM7001JJ
CF504
7.2MHZ
C557
15P
C558
15P
R570
OPEN
C559
1/50
C560
CK0.01
IC507
ICPN15
IC506
NJM7812FA(S)
C561
1/50
C562
1/50
C563
CK0.01
J607
OPEN
+24.5V
FB503
BEADS_INDUCTOR
C568
CK0.01
C569
0.01Z
4P_PIN_JACK
JK502
DAT/TAPE
IN
DAT/TAPE
OUT
C564
OPEN
R571
62K
C565
OPEN
R572
62K
C587
0.01Z
FB505
BEADS_INDUCTOR
R592
C589
10/16
R573
2.7M
C566
OPEN
R594
200K
R574
2.7M
C567
OPEN
R593
R595
200K
C590
10/16
CW113
11P_TUC-P
TO MAIN
(1U-2994)
CW141
14P TUC-P
TU L
GND(A1-1)
TU R
GND(A1-1)
DAT IN R
GND(A1-1)
DAT IN L
GND(A1-1)
DAT OUT R
GND(A1-1)
DAT OUT L
1U-2997-3
H/P_UNIT
TO FRONT AMP
(1U-2995-2)
CY033
H/PL
GND(A1-3)
H/PR
3P-PH
FB601
SHORT
R621
220(1W) SHORT
R622
R623
R624
220(1W)SHORT
C621
1000P(J)
C622
1000P(J)
JK601
R628
OPEN
C627
OPEN
C624
CK0.01
C625
CK0.01
C626
OPEN
W604
1U-2997-4
POWER. SW-UNIT
SW631
C631
0.01/400
W606
CY021
2P-VH
TO POWER SUPPLY-1
(1U-2995-1)
CY961
A
B
GND
+15V
-15V
R630
R631
R651
R640
TR603
TR604
R632
R633
R637
C637
R635
R634
R636
D605
C638
TR605
R639
C639
TR606
R652
R638
CY935
3P-KR
TO MAIN
(1U-2994)
CX035
3P W.T.
+49.5V
R641
1.2K
J608
*31_SHORT
J609
*31_SHORT
C601
CF0.1(250V)
C603
12000/63
D601
S10VB20F9
C605
CF0.1(250V)
C607
CF0.1(250V)
C606
CF0.1(250V)
CX932
3P W.T.
C602
CF0.1(250V)
C604
12000/63
R649
36K
C608
1/50
W605
OPEN
C614
OPEN
CX036
3P W.T.
-49.5V
1U-2997-2
POWER SUPPLY-2
CY037
3P W.T.
FROM
POWE


6
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A
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C
D
E
F
G
H
+12V
+15V
-15V
+6V
+24.5V
R550 5.6K
R551 10K
TR508 DTC144EK
C543 OPEN
IC504 (1/2) BA15218F
IC504 (2/2) BA15218F
C551 1/50
C553 CK1000P
R553 3.3K
LF503 *18_OPEN
C547 10/16
C545 10/16
R559 100
R565
*32 100
R563 3.9K
C555 22/16
R580 *24 0
DTC323TK TR509
TR510 DTC323TK
R555 3.3K
R557 100K
C549 OPEN
R561 10K
R567 3.3K
R568 3.3K
R554 3.3K
LF504 *18_OPEN
C546 10/16
R581 *24 0
R556 3.3K
R558 100K
C550 OPEN
C548 10/16
R560 100
R566 100
R564 3.9K
C556 22/16
D503 MA151A
TR511 DTA114TK
D504 MA151A
R562 10K
C552 1/50
C554 CK1000P
R577 22K
J505 OPEN
D505 MA151A
C572 OPEN
FB501 BEADS_INDUCTOR
IC503 LA3401
R548 10K
R547 100K
C541 2.2/50
C542 OPEN
C562 1/50
C563 CK0.01
J507 OPEN
FB503 BEADS_INDUCTOR
1U-2997-1 TUNER UNIT
CW141 14P TUC-P
TO MAIN (1U-2994)
DATA2
CLK2
STB2
ST/MONO
MUTE(T)
STEREO
RDS
TUNED
+6V(D1)
GND(A2-1)
+24V
GND(A5-1)
-15V
15V
1U-2997-5 PRE OUT UNIT
JK901 4P_PIN_JACK
TO POWER SUPPLY-1 [1U-2995-1]
CY038 3P-KR
FL PRE
FR PRE
C944 47/16
R982 680
C956 OPEN
C945 47/16
R983 680
C957 OPEN
C951 1/50
C952 CK0.01Z
FB903 BEADS_INDUCTOR
CY055 5P-KR
SW PRE
MUTE SW
GND(A1)
TO MAIN [1U-2994]
C946 47/16
R984 680
C958 OPEN
TR929 2SC2878(A/B)T
R988 22K
R990 100K
R991 100K
C953 CK100P
C959 OPEN
R985 10K
R989 1K
TR928 2SC2878(A/B)T
C947 47/16
C950 22/16
R992 220
FB904 OPEN
OPEN
CY042 4P-KR
CNT PRE
SL PRE
SR PRE
TO POWER SUPPLY-2 [1U-2997-2]
C948 OPEN
R986 OPEN
C960 OPEN
C949 OPEN
R987 OPEN
C961 OPEN
C954 OPEN
C955 OPEN
C506
J12FA(S)
CY037 3P W.T.
FROM POWER-TRANS
/B20F9
C605 CF0.1(250V)
C607 CF0.1(250V)
C606 CF0.1(250V)
C608 1/50
W605 OPEN
C614 OPEN
C.GND4
97-2
SUPPLY-2
CY028 TO FRONT AMP [1U-2995-2] 2P-VH
CY022 TO SURROUND AMP [1U-2995-3] 2P-VH
RL601
RL602
R627 13K
R625 13K
R626 13K
TO PRE OUT [1U-2995-9]
CX042 4P-KH
C609 CQ0.01
C610 CQ0.01
TM601
MAIN A
BI WIRING B
CENTER
R601 180(1W)
R604 180(1W)
D602 1SS270A
D603 1SS270A
R602 4.7K
R605 4.7K
R603 10K
R606 10K
TR601 2SC3311A
TR602 2SC3311A
C611 CQ0.01
C613 CQ0.01
C612 CQ0.01
LCH
RCH
SURROUND
CY041 4P-KR
+24V
GND(A2-2)
RL-C
RL-S
TO MAIN [1U-2994]

*	NO	* USA CANADA	ASIA	EUROPE	JAPAN
1	R514	0	0		0
2	R515	100	---		100
3	R516	1K	330		330
4	TR501	---	2SK161(GR)TP4		---
5	R517	---	330		---
6	R502	---	0		---
7	R536	0	1.2k		0
8	R544.545	100K	100k		100K
9	C539.540	750p	510p		510p
10	R575.576	120K	120k		120K
11	C536	100p	---		---
12	R555.556	3.3k	---		3.3K
13	C527	1/50	0.33/50		0.33/50
14	CF502	SFE 10.7MS2G	SFT 10.7MS2		SFE 10.7MS2G
15	CF501	SFE 10.7MA8	SFT 10.7MS2		SFE 10.7MA8
16	C537	---	22/16		---
17	LF501	---	ANTI BIRDIE FILTER		---
18	LF503.504	---	LPF		LPF 2320085004
19	IC501	F/E 2160102008	F/E 2169013004		F/E 2169012005
20	R579	0	---		0
21	R535	18K	39K		18K
22	R520	1K	1K		---
23	C519	---	CK100p		---
24	R580.581	0	---		---
25	D501	MA151A	MA151A		---
26	R501	10	10		---
27	TR503	DTA114EK	DTA114EK		---
28	R578	0	0		---
29	R645	---	10K		---
30	R646	---	5.6K		---
31	J608.609	SHORT	SHORT		OPEN
32	R563.564	3.9K	3.9K	13K	3.9K

——— +B LINE

— — — -B LINE

▨ SIGNAL LINE

NOTES

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

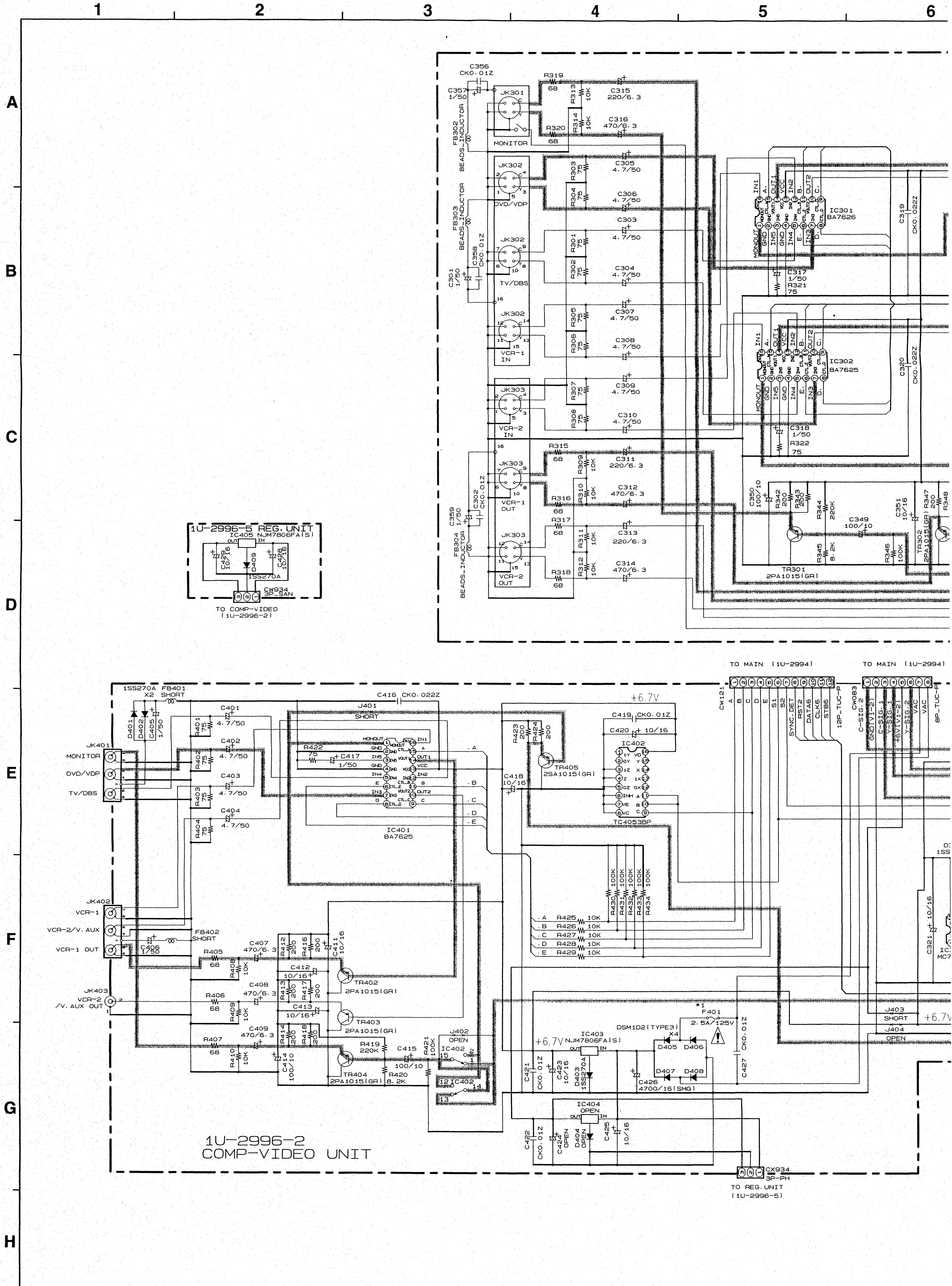
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

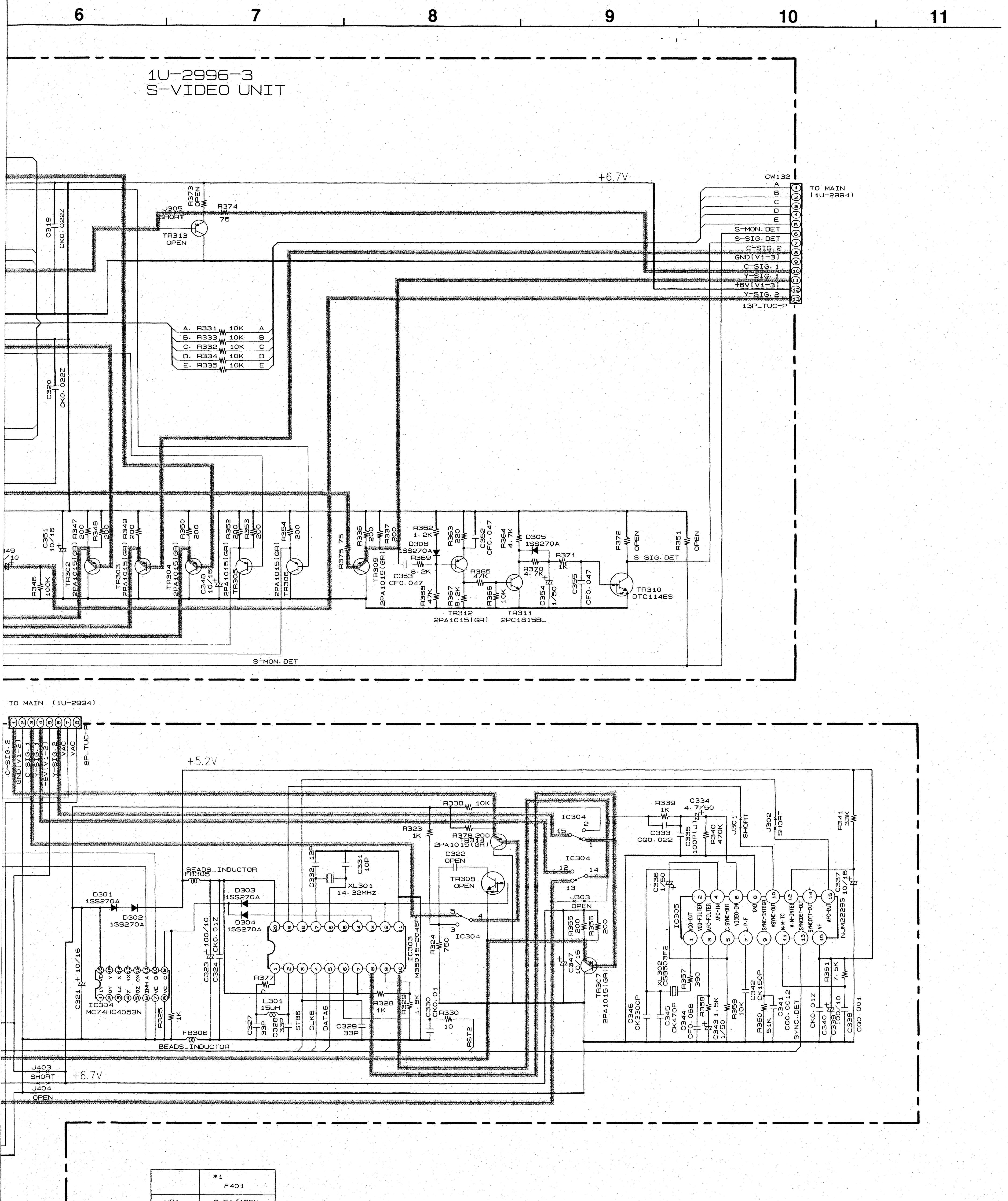
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM (3/11)



1
2
3
4
5
6
A
B
C
D
E
F
G
H
C356 CK0.01Z
C357 1/50
JK301
MONITOR
FB302 BEADS_INDUCTOR
R319 68
R313 10K
C315 220/6.3
R320 68
R314 10K
C316 470/6.3
JK302
DVD/VDP
R303 75
C305 4.7/50
R304 75
C306 4.7/50
FB303 BEADS_INDUCTOR
C358 CK0.01Z
C301 1/50
JK302
TV/DBS
R301 75
C303 4.7/50
R302 75
C304 4.7/50
JK302
VCR-1 IN
R305 75
C307 4.7/50
R306 75
C308 4.7/50
JK303
VCR-2 IN
R307 75
C309 4.7/50
R308 75
C310 4.7/50
JK303
VCR-1 OUT
R315 68
R309 10K
C311 220/6.3
R316 68
R310 10K
C312 470/6.3
C302 CK0.01Z
C359 1/50
FB304 BEADS_INDUCTOR
JK303
VCR-2 OUT
R317 68
R311 10K
C313 220/6.3
R318 68
R312 10K
C314 470/6.3
IC301 BA7626
IC302 BA7625
C319 CK0.022Z
C320 CK0.022Z
C317 1/50
R321 75
C318 1/50
R322 75
C350 100/10
R342 200
R343 200
R344 220K
C349 100/10
R345 8.2K
TR301 2PA1015(GR)
C351 10/16
R347 200
R346 100K
TR302 2PA1015(GR)
R348
1U-2996-5 REG. UNIT
IC405 NJM7806FA(S)
C429 10/16
D409
C428 10/16
1SS270A
CW934 3P_SAN
TO COMP-VIDEO (1U-2996-2)
TO MAIN (1U-2994)
CW121
A B C D E S1 S2 SYNC.DET RST2 DATA6 CLK6 STB6 12P_TUC-P
CW083
C-SIG.2 GND(V1-2) C-SIG.1 Y-SIG.1 +6V(V1-2) Y-SIG.2 VAC 8P_TUC-P
1SS270A X2
FB401 SHORT
D401
D402
C405 1/50
R401 75
C401 4.7/50
R402 75
C402 4.7/50
R403 75
C403 4.7/50
R404 75
C404 4.7/50
JK401
MONITOR
DVD/VDP
TV/DBS
C416 CK0.022Z
J401 SHORT
R422 75
C417 1/50
IC401 BA7625
R423 200
R424 200
TR405 2SA1015(GR)
C418 10/16
+6.7V
C419 CK0.01Z
C420 10/16
IC402
TC4053BP
R430 100K
R431 100K
R432 100K
R433 100K
R434 100K
R425 10K
R426 10K
R427 10K
R428 10K
R429 10K
JK402
VCR-1
VCR-2/V. AUX
VCR-1 OUT
FB402 SHORT
C406 1/50
R405 68
C407 470/6.3
R408 10K
R412 200
R415 200
C411 10/16
C412 10/16
TR402 2PA1015(GR)
JK403
VCR-2 /V. AUX OUT
R406 68
C408 470/6.3
R409 10K
R413 200
R417 200
C413 10/16
TR403 2PA1015(GR)
R407 68
C409 470/6.3
R410 10K
R414 200
R418 200
C414 100/10
R419 220K
C415 100/10
R420 8.2K
R421 100K
TR404 2PA1015(GR)
J402 OPEN
IC402
+6.7V
IC403 NJM7806FA(S)
C421 CK0.01Z
C423 10/16
D403 1SS270A
DSM1D2(TYPE3) X4
D405
D406
D407
D408
C426 4700/16(SMG)
*1 F401 2.5A/125V
C427 CK0.01Z
IC404 OPEN
C422 CK0.01Z
C424 OPEN
D404 OPEN
C425 10/16
1U-2996-2 COMP-VIDEO UNIT
CX934 3P_PH
TO REG. UNIT (1U-2996-5)
J403 SHORT
J404 OPEN
+6.7V
C321 10/16


6
7
8
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11
1U-2996-3
S-VIDEO UNIT
+6.7V
CW132
TO MAIN (1U-2994)
A
B
C
D
E
S-MON. DET
S-SIG. DET
C-SIG. 2
GND(V1-3)
C-SIG. 1
Y-SIG. 1
+6V(V1-3)
Y-SIG. 2
13P_TUC-P
R373 OPEN
J305 SHORT
R374 75
TR313 OPEN
C319 CK0. 022Z
C320 CK0. 022Z
A. R331 10K A
B. R333 10K B
C. R332 10K C
D. R334 10K D
E. R335 10K E
C351 10/16
R346 100K
R347 200
R348 200
R349 200
R350 200
R352 200
R353 200
R354 200
R375 75
R336 200
R337 200
TR302 2PA1015(GR)
TR303 2PA1015(GR)
TR304 2PA1015(GR)
C348 10/16
TR305 2PA1015(GR)
TR306 2PA1015(GR)
TR309 2PA1015(GR)
R362 1.2K
D306 1SS270A
R359 8.2K
C353 CF0.047
R363 220
C352 CF0.047
R364 4.7K
D305 1SS270A
R371 1K
R365 47K
R370 4.7K
R366 10K
R368 47K
R367 8.2K
C354 1/50
C355 CF0.047
TR312 2PA1015(GR)
TR311 2PC1815BL
R372 OPEN
R351 OPEN
S-SIG. DET
TR310 DTC114ES
S-MON. DET
TO MAIN (1U-2994)
C-SIG. 2
GND(V1-2)
C-SIG. 1
+6V(V1-2)
Y-SIG. 1
Y-SIG. 2
VAC
VAC
8P_TUC-P
+5.2V
R338 10K
R323 1K
R378 200
R314
2PA1015(GR)
C322 OPEN
TR308 OPEN
IC304
C332 12P
C331 10P
XL301 14.32MHz
BEADS_INDUCTOR
FB305
D301 1SS270A
D302 1SS270A
D303 1SS270A
D304 1SS270A
C321 10/16
IC304 MC74HC4053N
R325 1K
C323 100/10
C324 CK0.01Z
IC303 M35015-204SP
R324 750
R377
L301 15uH
C327 33P
C328 33P
STB6
CLK6
DATA6
C329 33P
R329 1.8K
R328 1K
C330 CK0.01
R330 10
RST2
FB306
BEADS_INDUCTOR
J403 SHORT
+6.7V
J404 OPEN
J303 OPEN
R355 200
R356 200
C347 10/16
TR307 2PA1015(GR)
R339 1K
C334 4.7/50
C333 CQ0.022
C335 100P(J)
R340 470K
J301 SHORT
J302 SHORT
R341 33K
C336 1/50
IC305
VCO-OUT
VCO-FILTER
AFC-FILTER
AFC-IN
C.SYNC-OUT
VIDEO-IN
L.P.F
GND
SYNC-OUT
SYNC-INTEGR
VSYNC-OUT
H.H-TC
H.H-INTEG
SYNCDET-OUT
SYNCDET-OUT
V+
AFC-OUT
C337 10/16
NJM2229S
XL302 CSB503F2
R357 390
C346 CK330P
C345 CK470P
C344 CF0.068
R358 1.5K
C343 1/50
R359 10K
C342 CK150P
R360 51K
C341 CQ0.0012
SYNC. DET
CK0.012
C340 C339 10/10
R361 7.5K
C338 CQ0.001

	*1 F401
* USA CANADA	2.5A/125V 2061039076
ASIA	2.5A/250V 2061015032
EUROPE	2.5A/250V 2061015032
JAPAN	2.5A/125V 2061035067

─── +B LINE

▨ SIGNAL LINE

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

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WARNING:
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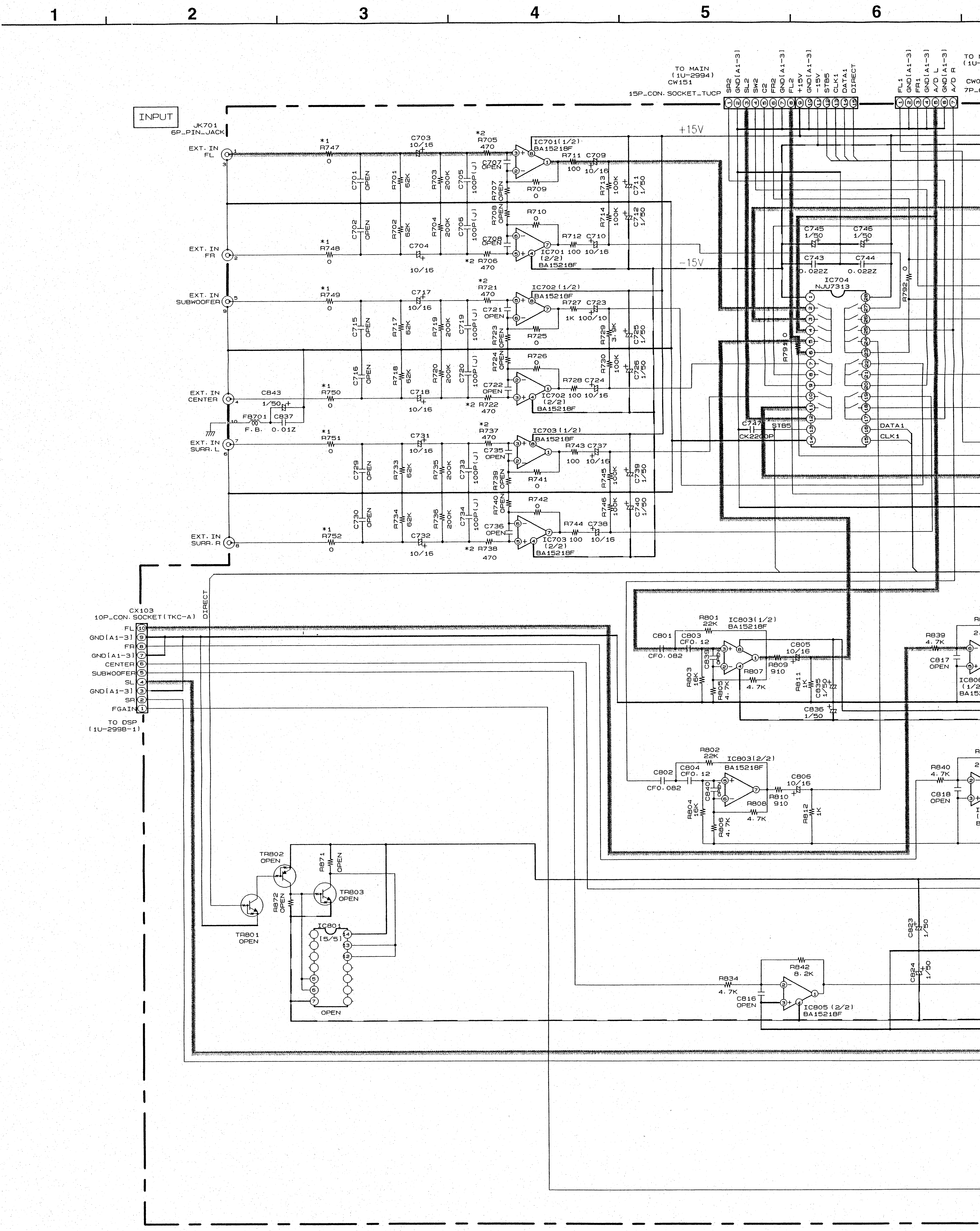
SCHEMATIC DIAGRAM (4/11)



1
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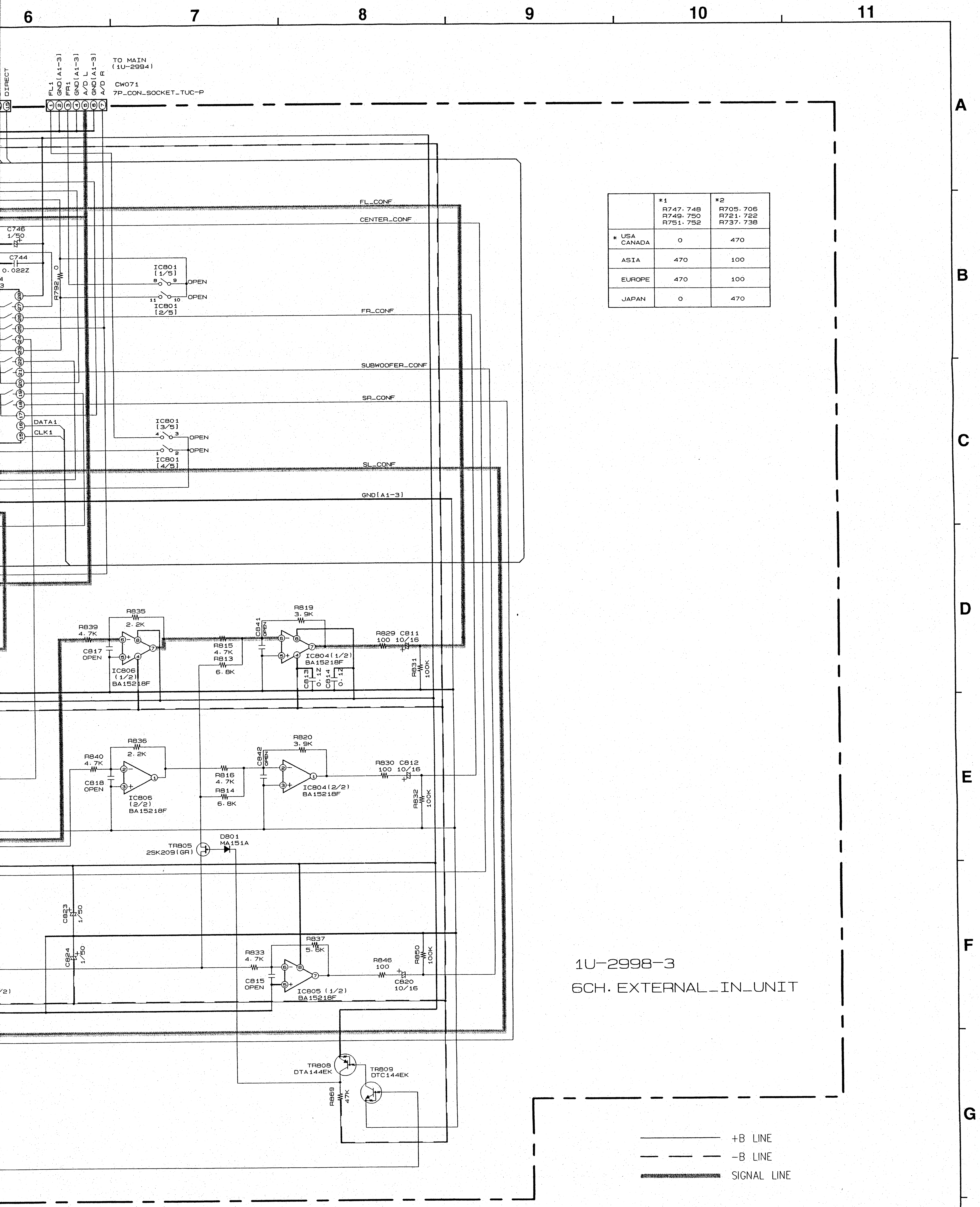
INPUT
JK701
6P_PIN_JACK
EXT. IN FL
EXT. IN FR
EXT. IN SUBWOOFER
EXT. IN CENTER
EXT. IN SURR. L
EXT. IN SURR. R
FB701 F.B.
C837 0.01Z
C843 1/50
*1 R747 0
*1 R748 0
*1 R749 0
*1 R750 0
*1 R751 0
*1 R752 0
C701 OPEN
C702 OPEN
R701 62K
R702 62K
R703 200K
R704 200K
C705 100P(J)
C706 100P(J)
C703 10/16
C704 10/16
*2 R705 470
*2 R706 470
C707 OPEN
C708 OPEN
R707 OPEN
R708 OPEN
R709 0
R710 0
R711 100
R712 100
C709 10/16
C710 10/16
R713 100K
R714 100K
C711 1/50
C712 1/50
IC701(1/2) BA15218F
IC701 (2/2) BA15218F
+15V
-15V
C715 OPEN
C716 OPEN
R717 62K
R718 62K
R719 200K
R720 200K
C719 100P(J)
C720 100P(J)
C717 10/16
C718 10/16
*2 R721 470
*2 R722 470
C721 OPEN
C722 OPEN
R723 OPEN
R724 OPEN
R725 0
R726 0
R727 1K
R728 100
C723 100/10
C724 10/16
R729 3.9K
R730 100K
C725 1/50
C726 1/50
IC702(1/2) BA15218F
IC702 (2/2) BA15218F
C729 OPEN
C730 OPEN
R733 62K
R734 62K
R735 200K
R736 200K
C733 100P(J)
C734 100P(J)
C731 10/16
C732 10/16
*2 R737 470
*2 R738 470
C735 OPEN
C736 OPEN
R739 OPEN
R740 OPEN
R741 0
R742 0
R743 100
R744 100
C737 10/16
C738 10/16
R745 100K
R746 100K
C739 1/50
C740 1/50
IC703(1/2) BA15218F
IC703 (2/2) BA15218F
TO MAIN (1U-2994) CW151
15P_CON. SOCKET_TUCP
SR2
GND(A1-3)
SL2
SW2
C2
FR2
GND(A1-3)
FL2
+15V
GND(A1-3)
-15V
STB5
CLK1
DATA1
DIRECT
FL1
GND(A1-3)
FR1
GND(A1-3)
A/D L
GND(A1-3)
A/D R
TO M (1U-
CW0
7P_
C745 1/50
C746 1/50
C743 0.022Z
C744 0.022Z
IC704 NJU7313
R792 0
R791 0
C747 CK220P
STB5
DATA1
CLK1
CX103
10P_CON. SOCKET(TKC-A)
DIRECT
FL
GND(A1-3)
FR
GND(A1-3)
CENTER
SUBWOOFER
SL
GND(A1-3)
SR
FGAIN
TO DSP (1U-2998-1)
R801 22K
IC803(1/2) BA15218F
C801 CF0.082
C803 CF0.12
C839
R803 16K
R805 4.7K
R807 4.7K
R809 910
C805 10/16
R811 1K
C835 1/50
C836 1/50
R802 22K
IC803(2/2) BA15218F
C802 CF0.082
C804 CF0.12
C840
R804 16K
R806 4.7K
R808 4.7K
R810 910
C806 10/16
R812 1K
R839 4.7K
C817 OPEN
IC806 (1/2 BA15
R840 4.7K
C818 OPEN
TR802 OPEN
TR803 OPEN
TR801 OPEN
R871 OPEN
R872 OPEN
IC801 (5/5)
OPEN
R834 4.7K
C816 OPEN
R842 8.2K
IC805 (2/2) BA15218F
C823 1/50
C824 1/50

NOTES
ALL RESISTANCE VALUES IN OHM. k=
ALL CAPACITANCE VALUES IN MICRO
EACH VOLTAGE AND CURRENT ARE
CONDITION.
CIRCUIT AND PARTS ARE SUBJECT T
NOTICE.


6
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A
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H
TO MAIN
(1U-2994)
CW071
7P_CON_SOCKET_TUC-P
FL1
GND(A1-3)
FR1
GND(A1-3)
A/D L
GND(A1-3)
A/D R
DIRECT
FL_CONF
CENTER_CONF
FR_CONF
SUBWOOFER_CONF
SR_CONF
SL_CONF
GND(A1-3)
C746
1/50
C744
0.022Z
R792
IC801
(1/5)
IC801
(2/5)
IC801
(3/5)
IC801
(4/5)
OPEN
DATA1
CLK1
R835
2.2K
R839
4.7K
C817
OPEN
IC806
(1/2)
BA15218F
R815
4.7K
R813
6.8K
C841
OPEN
R819
3.9K
IC804(1/2)
BA15218F
C813
0.1Z
C814
0.1Z
R829
100
C811
10/16
R831
100K
R836
2.2K
R840
4.7K
C818
OPEN
IC806
(2/2)
BA15218F
R816
4.7K
R814
6.8K
C842
OPEN
R820
3.9K
IC804(2/2)
BA15218F
R830
100
C812
10/16
R832
100K
TR805
2SK209(GR)
D801
MA151A
C823
1/50
C824
1/50
R833
4.7K
R837
5.6K
C815
OPEN
IC805 (1/2)
BA15218F
R846
100
C820
10/16
R850
100K
TR808
DTA144EK
TR809
DTC144EK
R869
47K
1U-2998-3
6CH. EXTERNAL_IN_UNIT
+B LINE
-B LINE
SIGNAL LINE

	*1 R747. 748 R749. 750 R751. 752	*2 R705. 706 R721. 722 R737. 738
* USA CANADA	0	470
ASIA	470	100
EUROPE	470	100
JAPAN	0	470

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

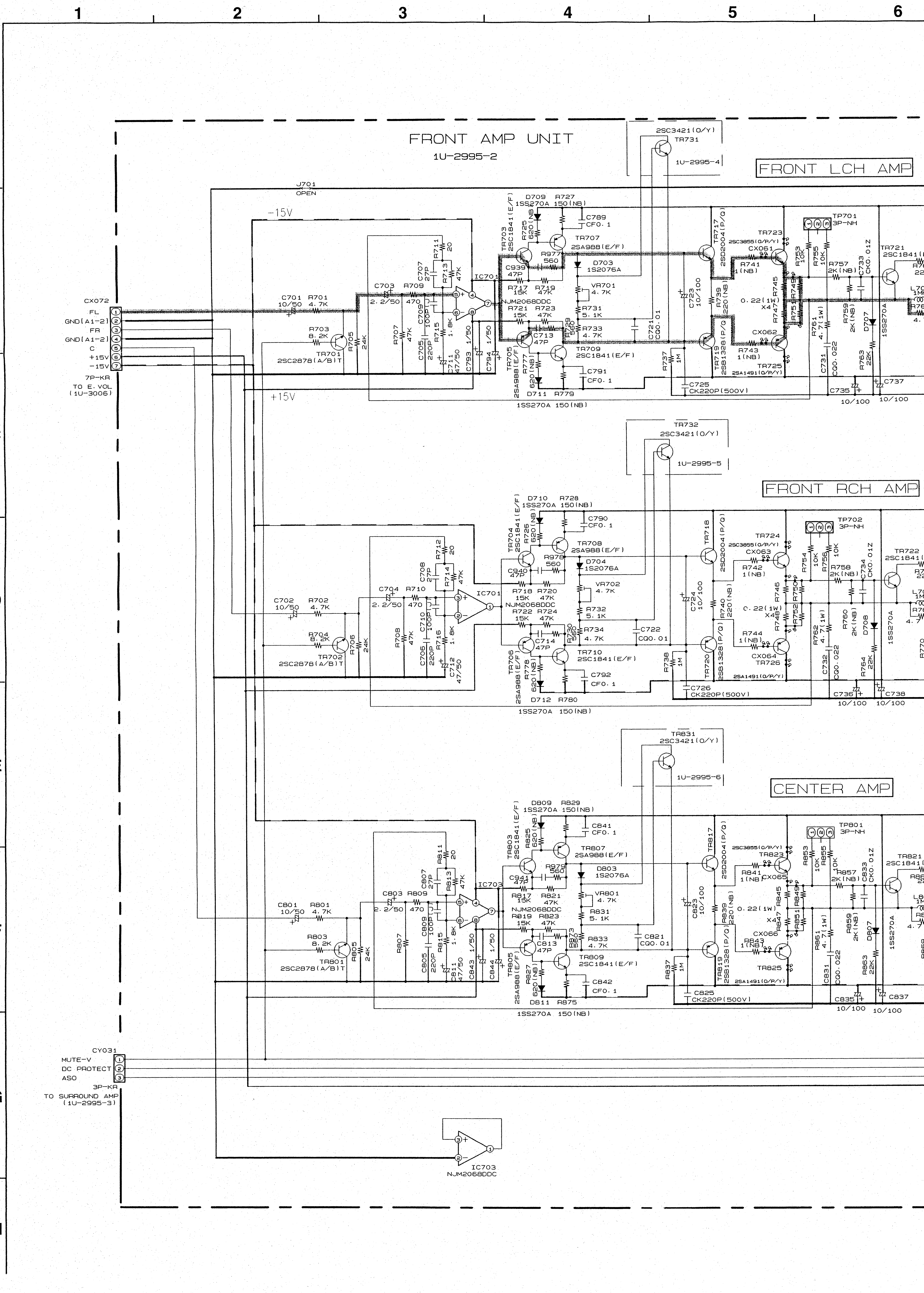
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM (5/11)


1
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6
A
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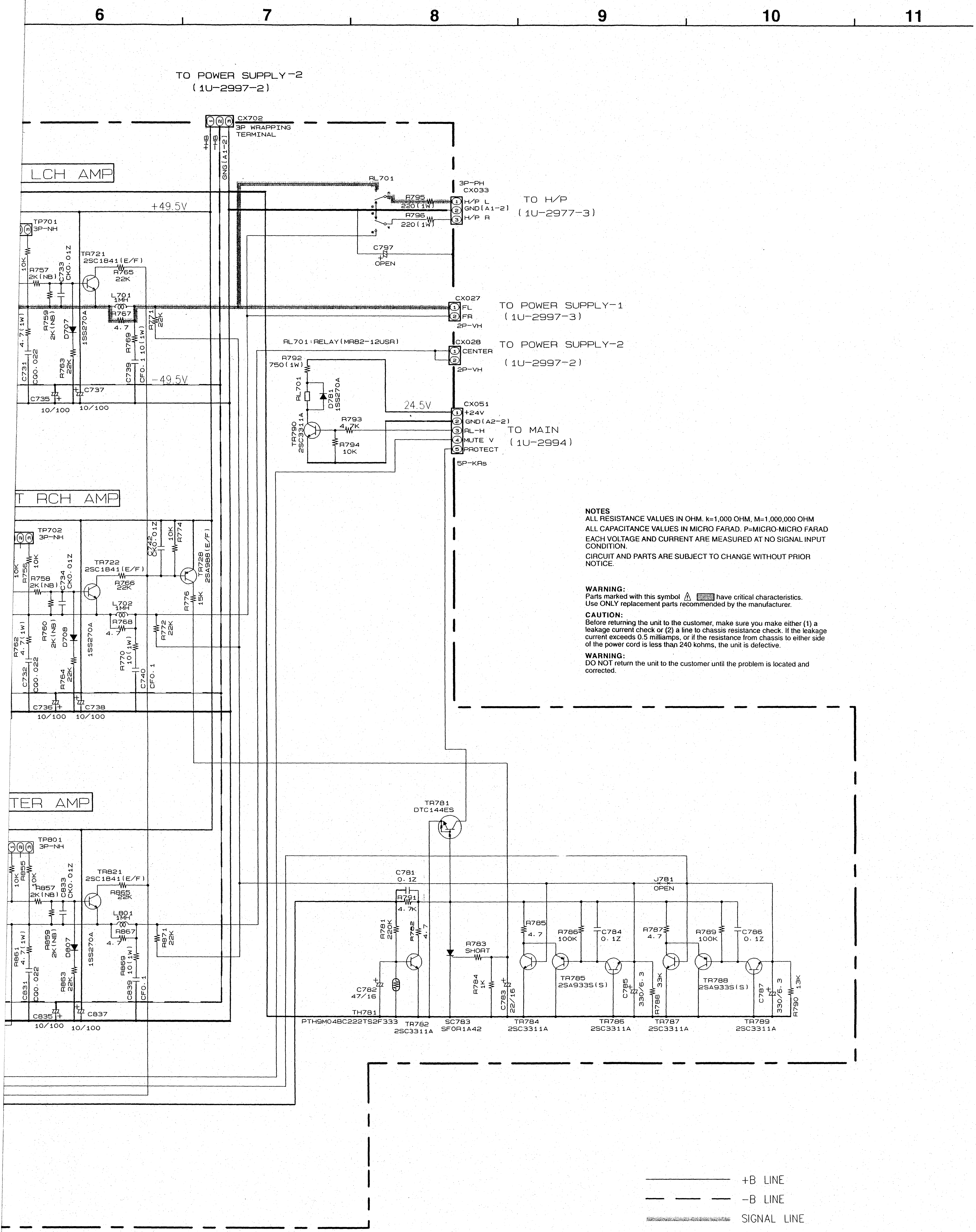
C
D
E
F
G
H
FRONT AMP UNIT
1U-2995-2
FRONT LCH AMP
FRONT RCH AMP
CENTER AMP
2SC3421(O/Y)
TR731
1U-2995-4
TR732
1U-2995-5
TR831
1U-2995-6
J701
OPEN
-15V
+15V
CX072
FL
GND(A1-2)
FR
GND(A1-2)
C
+15V
-15V
7P-KR
TO E. VOL
(1U-3006)
CY031
MUTE-V
DC PROTECT
ASO
3P-KR
TO SURROUND AMP
(1U-2995-3)
C701 10/50
R701 4.7K
R703 8.2K
TR701 2SC2878(A/B)T
R705 24K
C703 2.2/50
R709 470
C707 27P
R711 20
R713 47K
R707 47K
C709 100P
R715 1.8K
C705 220P
C711 47/50
C793 1/50
C794 1/50
IC701
NJM2068DDC
TR703 2SC1841(E/F)
D709 1SS270A
R727 150(NB)
R725 620(NB)
C789 CF0.1
TR707 2SA988(E/F)
R977 560
C939 47P
D703 1S2076A
R717 15K
R719 47K
R721 15K
R723 47K
VR701 4.7K
R731 5.1K
R733 4.7K
R729 560
C713 47P
TR705 2SA988(E/F)
R777 620(NB)
TR709 2SC1841(E/F)
C791 CF0.1
D711 R779
1SS270A 150(NB)
C721 CQ0.01
C723 10/100
R739 220(NB)
R737 1M
C725 CK220P(500V)
TR717 2SD2004(P/Q)
TR719 2SB1328(P/Q)
TR723 2SC3855(O/P/Y)
CX061
R741 1(NB)
0.22(1W) X4
R745
R747
R749
R751
R743 1(NB)
CX062
TR725 2SA1491(O/P/Y)
R753 10K
R755 10K
TP701 3P-NH
R757 2K(NB)
C733 CK0.01Z
R759 2K(NB)
R761 4.7(1W)
C731 CQ0.022
R763 22K
D707 1SS270A
C735 10/100
C737 10/100
TR721 2SC1841
C702 10/50
R702 4.7K
R704 8.2K
TR702 2SC2878(A/B)T
R706 24K
C704 2.2/50
R710 470
C708 27P
R712 20
R714 47K
R708 47K
C710 100P
R716 1.8K
C706 220P
C712 47/50
TR704 2SC1841(E/F)
D710 1SS270A
R728 150(NB)
R726 620(NB)
C790 CF0.1
TR708 2SA988(E/F)
R978 560
C940 47P
D704 1S2076A
R718 15K
R720 47K
R722 15K
R724 47K
VR702 4.7K
R732 5.1K
R734 4.7K
R730 560
C714 47P
TR706 2SA988(E/F)
R778 620(NB)
TR710 2SC1841(E/F)
C792 CF0.1
D712 R780
C722 CQ0.01
C724 10/100
R740 220(NB)
R738 1M
C726 CK220P(500V)
TR718 2SD2004(P/Q)
TR720 2SB1328(P/Q)
TR724 2SC3855(O/P/Y)
CX063
R742 1(NB)
0.22(1W) X4
R746
R748
R750
R752
R744 1(NB)
CX064
TR726 2SA1491(O/P/Y)
R754 10K
R756 10K
TP702 3P-NH
R758 2K(NB)
C734 CK0.01Z
R760 2K(NB)
R762 4.7(1W)
C732 CQ0.022
R764 22K
D708 1SS270A
C736 10/100
C738 10/100
TR722 2SC1841
C801 10/50
R801 4.7K
R803 8.2K
TR801 2SC2878(A/B)T
R805 24K
C803 2.2/50
R809 470
C807 27P
R811 20
R813 47K
R807
C809 100P
R815 1.8K
C805 220P
C811 47/50
C843 1/50
C844 1/50
IC703
TR803 2SC1841(E/F)
D809 1SS270A
R829 150(NB)
R825 620(NB)
C841 CF0.1
TR807 2SA988(E/F)
R979 560
C941 47P
D803 1S2076A
R817 15K
R821 47K
R819 15K
R823 47K
VR801 4.7K
R831 5.1K
R833 4.7K
C813 47P
TR805 2SA988(E/F)
R827 620(NB)
TR809 2SC1841(E/F)
C842 CF0.1
D811 R875
1SS270A 150(NB)
C821 CQ0.01
C823 10/100
R839 220(NB)
R837 1M
C825 CK220P(500V)
TR817 2SD2004(P/Q)
TR819 2SB1328(P/Q)
TR823 2SC3855(O/P/Y)
CX065
R841 1(NB)
0.22(1W) X4
R845
R847
R849
R851
R843 1(NB)
CX066
TR825 2SA1491(O/P/Y)
R853 10K
R855 10K
TP801 3P-NH
R857 2K(NB)
C833 CK0.01Z
R859 2K(NB)
R861 4.7(1W)
C831 CQ0.022
R863 22K
D807 1SS270A
C835 10/100
C837 10/100
TR821 2SC1841
IC703
NJM2068DDC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11
TO POWER SUPPLY-2
(1U-2997-2)
CX702
3P WRAPPING TERMINAL
+HB
-HB
GNG(A1-2)
LCH AMP
+49.5V
TP701
3P-NH
TR721
2SC1841(E/F)
R765
22K
R757
2K(NB)
C733
CK0.01Z
L701
1MH
R767
4.7
R759
2K(NB)
D707
1SS270A
R771
22K
R769
10(1W)
C731
C0.022
R763
22K
C739
CF0.1
-49.5V
C735
C737
10/100
10/100
RL701
R795
220(1W)
R796
220(1W)
3P-PH
CX033
H/P L
GND(A1-2)
H/P R
TO H/P
(1U-2977-3)
C797
OPEN
CX027
FL
FR
2P-VH
TO POWER SUPPLY-1
(1U-2997-3)
RL701:RELAY(MR82-12USR)
CX028
CENTER
2P-VH
TO POWER SUPPLY-2
(1U-2997-2)
R792
750(1W)
RL701
D781
1SS270A
24.5V
CX051
+24V
GND(A2-2)
RL-H
MUTE V
PROTECT
5P-KRs
TO MAIN
(1U-2994)
R793
4.7K
R794
10K
TR790
2SC3311A
RCH AMP
TP702
3P-NH
R756
10K
TR722
2SC1841(E/F)
R758
2K(NB)
C734
CK0.01Z
R766
22K
C742
CK0.01Z
R774
10K
TR728
2SA988(E/F)
R776
15K
L702
1MH
R768
4.7
R762
4.7(1W)
R760
2K(NB)
D708
1SS270A
R770
10(1W)
R772
22K
C732
C0.022
R764
22K
C740
CF0.1
C736
C738
10/100
10/100
TER AMP
TP801
3P-NH
R855
10K
TR821
2SC1841(E/F)
R857
2K(NB)
C833
CK0.01Z
R865
22K
L801
1MH
R867
4.7
R861
4.7(1W)
R859
2K(NB)
D807
1SS270A
R869
10(1W)
R871
22K
C831
C0.022
R863
22K
C839
CF0.1
C835
C837
10/100
10/100
TR781
DTC144ES
C781
0.1Z
R791
4.7K
R781
220K
R782
4.7
J781
OPEN
R785
4.7
R786
100K
C784
0.1Z
R787
4.7
R789
100K
C786
0.1Z
R783
SHORT
R784
1K
C783
22/16
C782
47/16
TH781
PTH9M04BC222TS2F333
TR782
2SC3311A
SC783
SF0R1A42
TR785
2SA933S(S)
C785
330/6.3
R788
33K
TR788
2SA933S(S)
C787
330/6.3
R790
13K
TR784
2SC3311A
TR786
2SC3311A
TR787
2SC3311A
TR789
2SC3311A
+B LINE
-B LINE
SIGNAL LINE

NOTES

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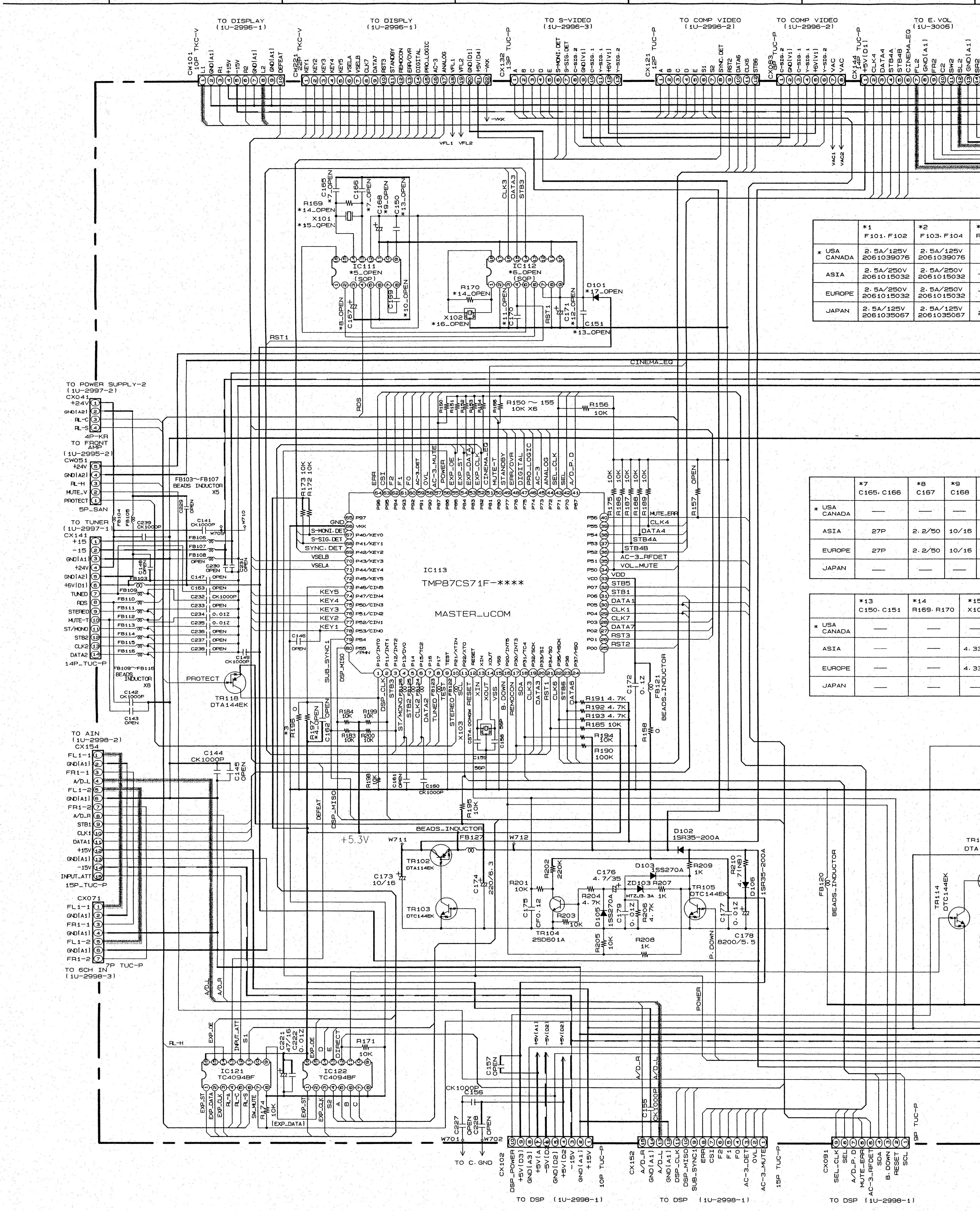
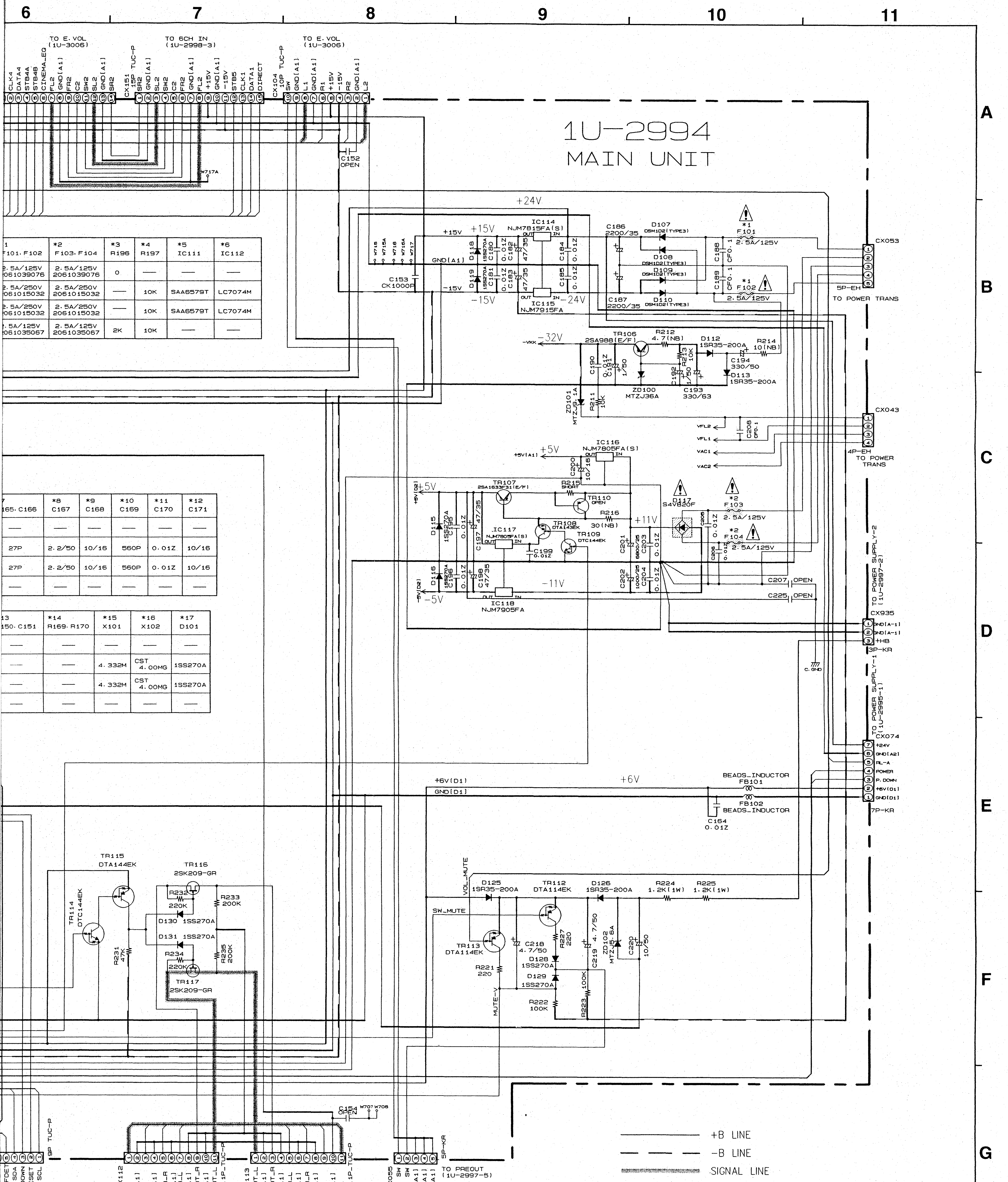
SCHEMATIC DIAGRAM (6/11)


TO DISPLAY (1U-2996-1)
CW101 10P TKC-V
L1
GND(A1)
R1
+15V
-15V
R2
GND(A1)
L2
GND(A1)
DEFEAT
TO DISPLY (1U-2996-1)
CW221 22P TKC-V
KEY1
KEY2
KEY3
KEY4
KEY5
VSELA
VSELB
CLK7
DATA7
RST3
STANDBY
REMOCON
ERR/OVR
DIGITAL
PRO_LOGIC
AC-3
ANALOG
VFL1
VFL2
GND(D1)
+5V(D4)
-VKK
VFL1
VFL2
TO S-VIDEO (1U-2996-3)
CX132 13P TUC-P
S-MONI.DET
S-SIG.DET
C-SIG.2
GND(V1)
C-SIG.1
Y-SIG.1
+6V(V1)
Y-SIG.2
TO COMP VIDEO (1U-2996-2)
CX121 12P TUC-P
S1
S2
SYNC.DET
RST2
DATA6
CLK6
STB6
TO COMP VIDEO (1U-2996-2)
CX093 8P TUC-P
VAC
VAC1
VAC2
TO E.VOL (1U-3006)
CX144 14P TUC-P
+5V(D1)
CLK4
DATA4
STB4A
STB4B
CINEMA_EQ
FL2
GND(A1)
FR2
C2
SW2
SL2
SR2
R169 *14_OPEN
X101 *15_OPEN
C165 *7_OPEN
C166 *7_OPEN
C168 *9_OPEN
C150 *13_OPEN
IC111 *5_OPEN (SOP)
C169 *10_OPEN
C167 *8_OPEN
CLK3
DATA3
STB3
IC112 *6_OPEN (SOP)
R170 *14_OPEN
X102 *16_OPEN
C170 *11_OPEN
C171 *12_OPEN
RST1
D101 *17_OPEN
C151 *13_OPEN
CINEMA_EQ
TO POWER SUPPLY-2 (1U-2997-2)
CX041
+24V
GND(A2)
RL-C
RL-S
4P-KR
TO FRONT AMP (1U-2995-2)
CW051
+24V
GND(A2)
RL-H
MUTE_V
PROTECT
5P_SAN
TO TUNER (1U-2997-1)
CX141
+15
-15
GND(A1)
+24V
GND(A2)
+5V(D1)
TUNED
RDS
STEREO
MUTE-T
ST/MONO
STB2
CLK2
DATA2
14P_TUC-P
FB103~FB107 BEADS INDUCTOR X5
FB109~FB116 BEADS INDUCTOR X8
PROTECT
TR118 DTA144EK
R150 ~ 155 10K X6
R156 10K
R173 10K
R172 10K
IC113
TMP87CS71F-****
MASTER_uCOM
S-MONI.DET
S-SIG.DET
SYNC.DET
VSELB
VSELA
KEY5
KEY4
KEY3
KEY2
KEY1
MUTE_ERR
CLK4
DATA4
STB4B
STB4A
AC-3_RFDET
VOL_MUTE
VDD
STB5
STB1
DATA1
CLK1
CLK7
DATA7
RST3
RST2
SUB_SYNC1
DSP_MISO
DSP_CLK
STB3
ST/MONO
STB2
CLK2
DATA2
TUNED
TEST
STEREO
SCL
X103 CST4.00MGW
RESET
XIN
XOUT
VSS
B.DOWN
REMOCON
SDA
CLK3
DATA3
RST1
CLK6
STB6
DATA6
R191 4.7K
R192 4.7K
R193 4.7K
R185 10K
R194 10K
R190 100K
C172 0.1Z
FB121 BEADS_INDUCTOR
R158 0
TO AIN (1U-2998-2)
CX154
FL1-1
GND(A1)
FR1-1
A/D-L
FL1-2
GND(A1)
FR1-2
A/D_R
STB1
CLK1
DATA1
+15V
GND(A1)
-15V
INPUT_ATT
15P_TUC-P
CX071
FL1-1
GND(A1)
FR1-1
GND(A1)
FL1-2
GND(A1)
FR1-2
7P TUC-P
TO 6CH IN (1U-2998-3)
C144 CK1000P
C145 OPEN
C160 CK1000P
+5.3V
BEADS_INDUCTOR
FB127
W711
W712
TR102 DTA114EK
TR103 DTC144EK
C173 10/16
C174 220/6.3
D102 1SR35-200A
D103 1SS270A
R209 1K
R210 4.7(NB)
ZD103
R207 1K
TR105 DTC144EK
D106 1SR35-200A
R201 10K
R202 220K
C176 4.7/35
R204 4.7K
R203 10K
TR104 2SD601A
D105 1SS270A
C179 0.01Z
R206 4.7K
C177 0.1Z
C178 8200/5.5
R205 10K
R208 1K
P.DOWN
FB120 BEADS_INDUCTOR
TR114 DTC144EK
POWER
A/D_L
A/D_R
RL-H
EXP_OE
INPUT_ATT
S1
IC121 TC4094BF
EXP_ST
EXP_DATA
EXP_CLK
RL-A
RL-C
RL-S
SW_MUTE
R174 10K
C221 47/16
C222 0.01Z
IC122 TC4094BF
R171 10K
DIRECT
S2
CK1000P
C156
C157 OPEN
C227 OPEN
C228 OPEN
W701
W702
TO C.GND
CX102
DSP_POWER
+5V(D3)
GND(A3)
+5V(A1)
-5V(D2)
GND(D2)
+5V(D2)
-15V
GND(A1)
+15V
10P TUC-P
TO DSP (1U-2998-1)
CX152
A/D_R
GND(A1)
A/D_L
GND(A1)
DSP_CLK
DSP_MISO
SUB_SYNC1
ERR
CSI
F2
F1
FO
AC-3_DET
OVL
AC-3_MUTE
15P TUC-P
TO DSP (1U-2998-1)
CX091
SEL_CLK
SEL
A/D_P.D
MUTE_ERR
AC-3_RFDET
SDA
B.DOWN
RESET
SCL
9P TUC-P
TO DSP (1U-2998-1)

	*1 F101·F102	*2 F103·F104
* USA CANADA	2.5A/125V 2061039076	2.5A/125V 2061039076
ASIA	2.5A/250V 2061015032	2.5A/250V 2061015032
EUROPE	2.5A/250V 2061015032	2.5A/250V 2061015032
JAPAN	2.5A/125V 2061035067	2.5A/125V 2061035067

	*7 C165·C166	*8 C167	*9 C168
* USA CANADA	—	—	—
ASIA	27P	2.2/50	10/16
EUROPE	27P	2.2/50	10/16
JAPAN	—	—	—

	*13 C150·C151	*14 R169·R170
* USA CANADA	—	—
ASIA	—	—
EUROPE	—	—
JAPAN	—	—


6
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8
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11
A
B
C
D
E
F
G
1U-2994
MAIN UNIT
TO E.VOL (1U-3006)
TO 6CH IN (1U-2998-3)
TO E.VOL (1U-3006)
CX151 15P TUC-P
CX104 10P TUC-P
C152 OPEN
W717A
+24V
IC114 NJM7815FA(S)
IC115 NJM7915FA
+15V
-15V
-24V
GND(A1)
C153 CK1000P
C186 2200/35
C187 2200/35
D107 DSM1D2(TYPE3)
D108 DSM1D2(TYPE3)
D109 DSM1D2(TYPE3)
D110 DSM1D2(TYPE3)
*1 F101 2.5A/125V
*1 F102 2.5A/125V
CX053
5P-EH
TO POWER TRANS
-32V
TR106 2SA988(E/F)
R212 4.7(NB)
D112 1SR35-200A
R214 10(NB)
C194 330/50
D113 1SR35-200A
ZD100 MTZJ36A
C193 330/63
ZD101 MTZJ9.1A
R211 10K
CX043
4P-EH
TO POWER TRANS
VFL2
VFL1
VAC1
VAC2
C208 CF0.1
IC116 NJM7805FA(S)
+5V
+5V(A1)
C200 10/16
TR107 2SA1633F31(E/F)
R215 SHORT
TR110 OPEN
R216 30(NB)
TR108 DTA143EK
TR109 DTC144EK
IC117 NJM7805FA(S)
C199 0.01Z
IC118 NJM7905FA
+11V
-11V
-5V
D117 S4VB20F
*2 F103 2.5A/125V
*2 F104 2.5A/125V
C207 OPEN
C225 OPEN
TO POWER SUPPLY-2 (1U-2997-2)
CX935
GND(A-1)
+HB
3P-KR
C.GND
TO POWER SUPPLY-1 (1U-2995-1)
CX074
+24V
GND(A2)
RL-A
POWER
P.DOWN
+6V(D1)
GND(D1)
7P-KR
+6V
BEADS_INDUCTOR FB101
FB102 BEADS_INDUCTOR
C164 0.01Z
TR115 DTA144EK
TR116 2SK209-GR
TR114 DTC144EK
R232 220K
R233 200K
D130 1SS270A
D131 1SS270A
R231 47K
R234 220K
R235 200K
TR117 2SK209-GR
VOL_MUTE
SW_MUTE
D125 1SR35-200A
TR112 DTA114EK
D126 1SR35-200A
R224 1.2K(1W)
R225 1.2K(1W)
TR113 DTA114EK
C218 4.7/50
R227 220
C219 4.7/50
ZD102 MTZJ5.6A
C220 10/50
R221 220
D128 1SS270A
D129 1SS270A
MUTE-V
R222 100K
R223 100K
C154 OPEN
W707 W708
9P TUC-P
AC-3_RFDET
SDA
B.DOWN
RESET
SCL
(1U-2998-1)
CX112
TU_L
TU_R
DATIN_R
DATIN_L
DATOUT_R
DATOUT_L
11P_TUC-P
TO A.IN (1U-2998-2)
CX113
TO TUNER (1U-2997-1)
CX055
5P-KR
MUTE SW
TO PREOUT (1U-2997-5)
+B LINE
-B LINE
SIGNAL LINE

1 F101, F102	*2 F103, F104	*3 R196	*4 R197	*5 IC111	*6 IC112
2.5A/125V 061039076	2.5A/125V 2061039076	0	—	—	—
2.5A/250V 061015032	2.5A/250V 2061015032	—	10K	SAA6579T	LC7074M
2.5A/250V 061015032	2.5A/250V 2061015032	—	10K	SAA6579T	LC7074M
.5A/125V 061035067	2.5A/125V 2061035067	2K	10K	—	—

165, C166	*8 C167	*9 C168	*10 C169	*11 C170	*12 C171
—	—	—	—	—	—
27P	2.2/50	10/16	560P	0.01Z	10/16
27P	2.2/50	10/16	560P	0.01Z	10/16
—	—	—	—	—	—

13 150, C151	*14 R169, R170	*15 X101	*16 X102	*17 D101
—	—	—	—	—
—	—	4.332M	CST 4.00MG	1SS270A
—	—	4.332M	CST 4.00MG	1SS270A
—	—	—	—	—

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

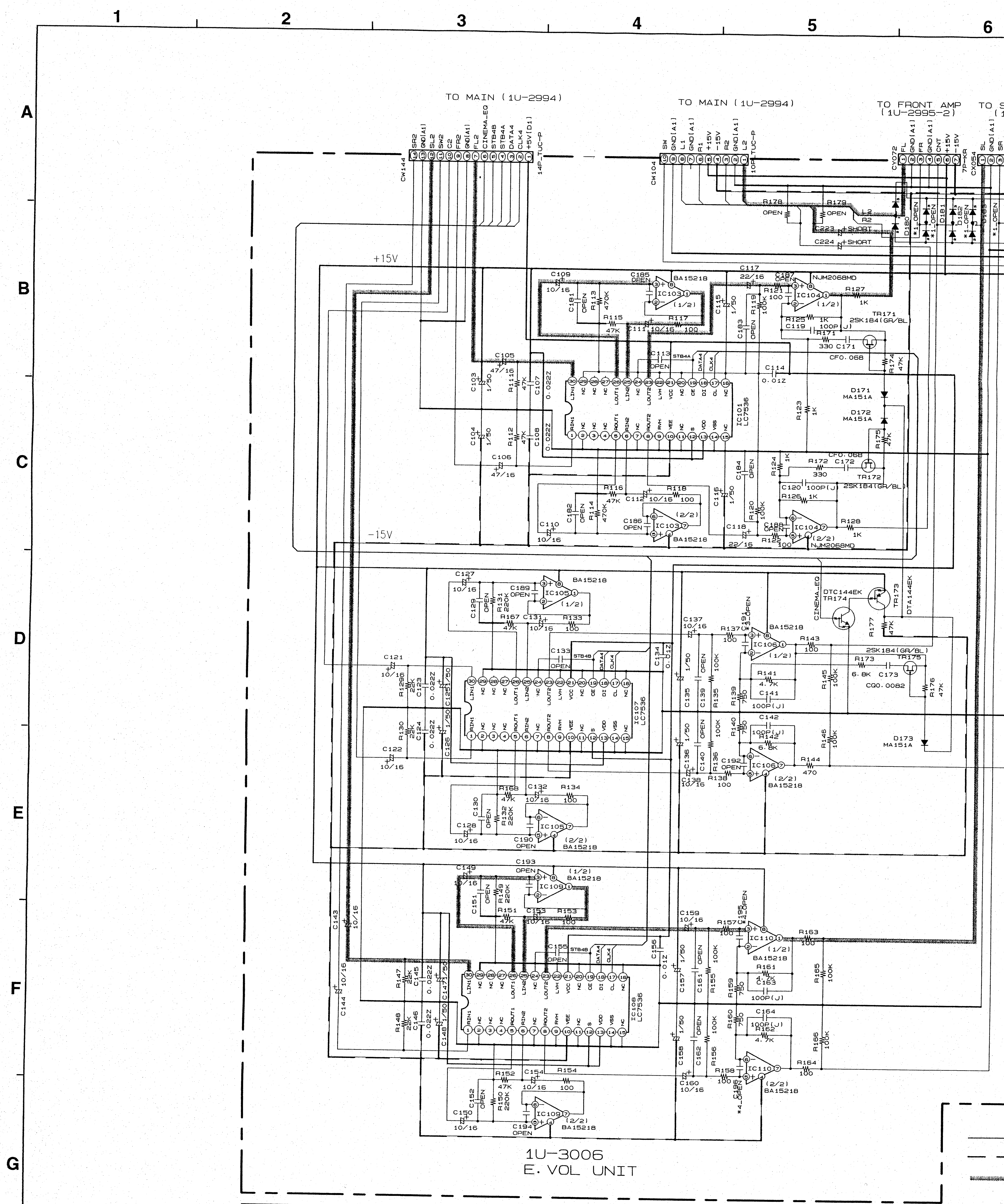
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

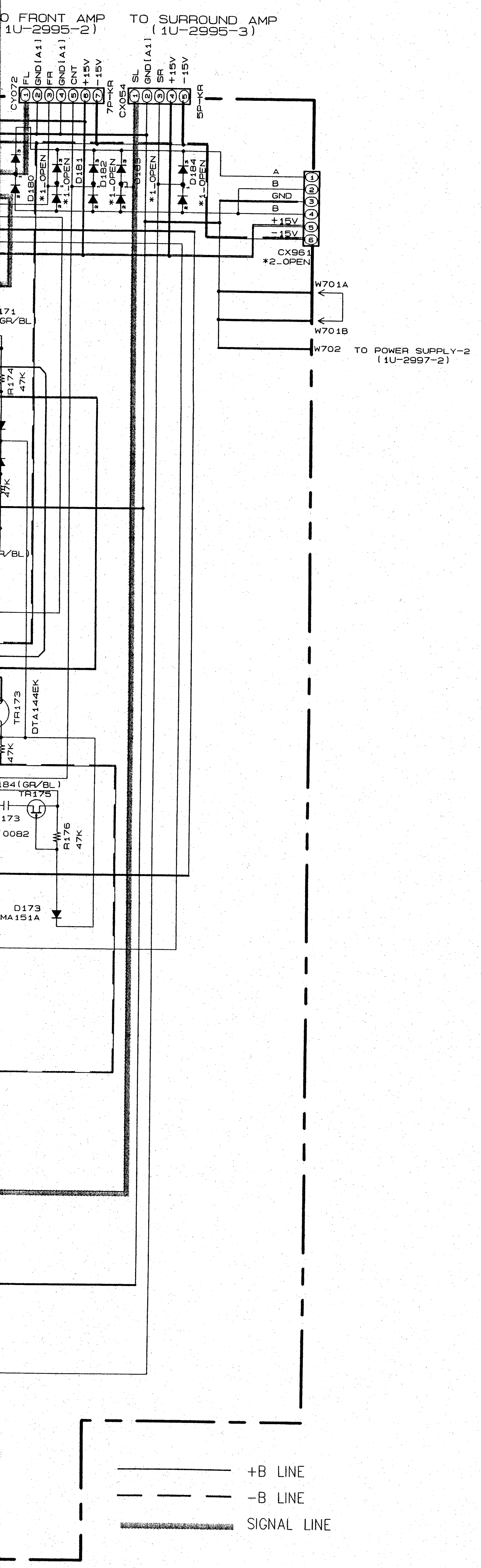
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM (7/11)


1
2
3
4
5
6
A
B
C
D
E
F
G
TO MAIN (1U-2994)
TO MAIN (1U-2994)
TO FRONT AMP (1U-2995-2)
CW144
14P_TUC-P
CW104
10P_TUC-P
CY072
7P-KR
CX054
+15V
-15V
IC101 LC7536
IC107 LC7536
IC108 LC7536
IC103 BA15218
IC104 NJM2068MD
IC105 BA15218
IC106 BA15218
IC109 BA15218
IC110 BA15218
TR171 2SK184(GR/BL)
TR172 2SK184(GR/BL)
TR173 DTA144EK
TR174 DTC144EK
TR175 2SK184(GR/BL)
D171 MA151A
D172 MA151A
D173 MA151A
CF0.068
CQ0.0082
CINEMA_EQ
1U-3006
E. VOL UNIT

	*1 D180 ～ 185	*2 CX961	*3 C191	*4 C195, 196
* USA / CANADA	---	---	---	---
ASIA / EUROPE	---	---	100P	100P
JAPAN	MA157A-TX	6P KR	---	---


6
7
8
9
10
11
TO FRONT AMP
(1U-2995-2)
TO SURROUND AMP
(1U-2995-3)
CX072
FL
GND(A1)
FR
GND(A1)
CNT
+15V
-15V
7P-KR
CX054
SL
GND(A1)
SR
+15V
-15V
5P-KR
D180
D181
D182
D183
D184
*1_OPEN
A
B
GND
B
+15V
-15V
CX961
*2_OPEN
W701A
W701B
W702
TO POWER SUPPLY-2
(1U-2997-2)
R174
47K
TR173
DTA144EK
47K
TR175
R176
47K
D173
MA151A
+B LINE
-B LINE
SIGNAL LINE

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
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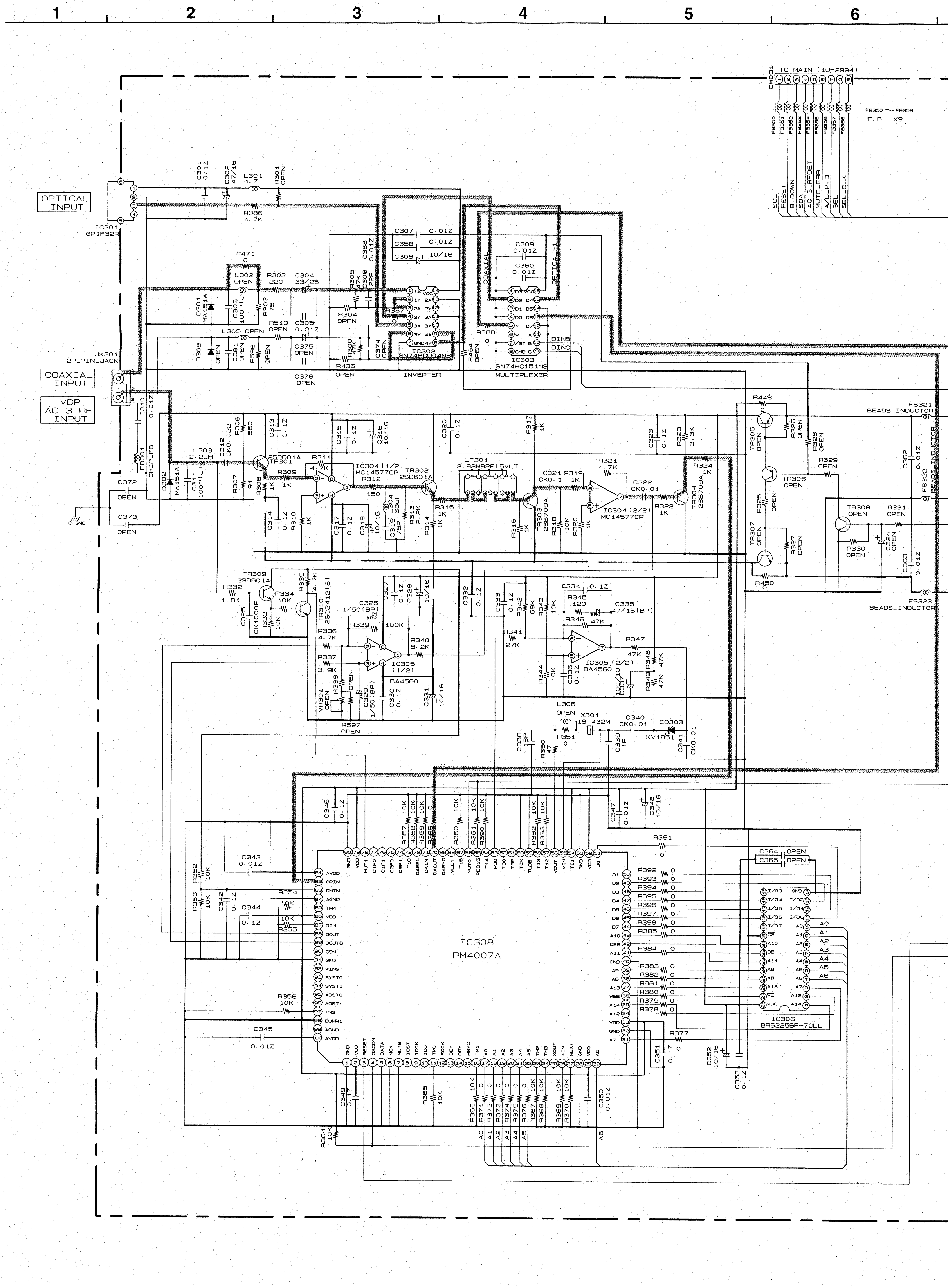
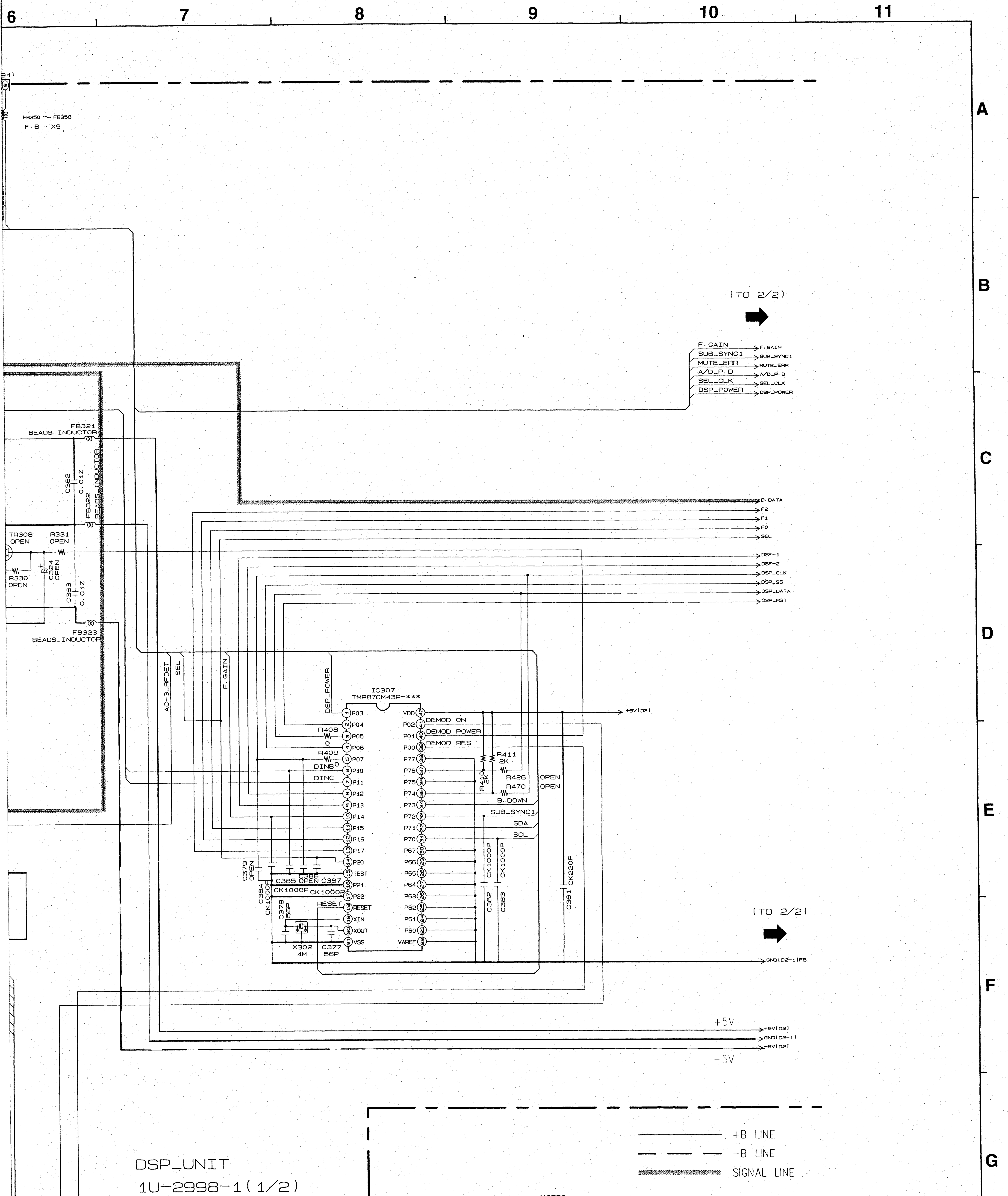
WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM (8/11)


1
2
3
4
5
6
TO MAIN (1U-2994)
CW091
FB350 ~ FB358
F.B X9
SCL
RESET
B.DOWN
SDA
AC-3_RFDET
MUTE_ERR
A/D_P.D
SEL
SEL_CLK
OPTICAL INPUT
IC301
GP1F32R
C301 0.1Z
C302 47/16
L301 4.7
R301 OPEN
R386 4.7K
R471 0
L302 OPEN
R303 220
C304 33/25
D301 MA151A
C303 100P(J)
R302 75
R519 OPEN
C305 0.01Z
L305 OPEN
D305 OPEN
C381 OPEN
R598 OPEN
C375 OPEN
C376 OPEN
R305 47K
C306 22P
C388 0.01Z
R304 OPEN
R300 1K
C374 OPEN
R436 OPEN
C307 0.01Z
C358 0.01Z
C308 10/16
R387
IC302
SN74HCU04NS
INVERTER
COAXIAL
OPTICAL-1
C309 0.01Z
C360 0.01Z
R388 0
R464 OPEN
IC303
SN74HC151NS
MULTIPLEXER
DINB
DINC
JK301
2P_PIN_JACK
COAXIAL INPUT
VDP AC-3 RF INPUT
C310 0.01Z
FB301 CHIP_FB
C372 OPEN
C373 OPEN
C.GND
L303 2.2uH
D302 MA151A
C311 100P(J)
C312 CK0.022
R306 560
R307 91
TR301 2SD601A
R308 1K
R309 1K
R311 4.7K
IC304 (1/2) MC14577CP
R312 150
TR302 2SD601A
C313 0.1Z
C314 0.1Z
R310 1K
C315 0.1Z
C316 10/16
C317 0.1Z
C318 10/16
C319 75P
L304 68uH
R313 2.2K
R314 1K
R315 1K
C320 0.1Z
LF301 2.88MBPF[5VLT]
R317 1K
R316 1K
TR303 2SB709A
R318 10K
R320 1K
C321 CK0.1
R319 1K
R321 4.7K
C322 CK0.01
IC304 (2/2) MC14577CP
R322 1K
C323 0.1Z
R323 3.3K
R324 1K
TR304 2SB709A
R449
TR305 OPEN
R326 OPEN
R328 OPEN
R329 OPEN
TR306 OPEN
R325 OPEN
TR307 OPEN
R327 OPEN
R450
TR308 OPEN
R331 OPEN
R330 OPEN
C324 OPEN
C362 0.01Z
C363 0.01Z
FB321 BEADS_INDUCTOR
FB322 BEADS_INDUCTOR
FB323 BEADS_INDUCTOR
TR309 2SD601A
R332 1.8K
R334 10K
R335 4.7K
C325 CK1000P
R333 10K
TR310 2SC2412(S)
C326 1/50(BP)
C327 0.1Z
C328 10/16
R339 100K
R336 4.7K
R340 8.2K
R337 3.9K
IC305 (1/2)
BA4560
R338 OPEN
VR301 OPEN
C329 1/50(BP)
C330 0.1Z
C331 10/16
R597 OPEN
C332 0.1Z
C333 0.1Z
R342 68K
R343 10K
C334 0.1Z
R345 120
R346 47K
C335 47/16(BP)
R341 27K
R347 47K
R344 10K
C336 0.1Z
IC305 (2/2) BA4560
C337 100/10
R348 47K
R349 47K
L306 OPEN
X301 18.432M
R351 0
C338 15P
R350 47
C339 1P
C340 CK0.01
CD303 KV1851
C341 CK0.01
C346 0.1Z
R357 10K
R358 10K
R359 10K
R389 0
R360 10K
R361 10K
R390 10K
R362 10K
R363 10K
C347 0.01Z
C348 10/16
R391 0
C343 0.01Z
R352 10K
R353 10K
C342 0.1Z
C344 0.1Z
R354 10K
R355 10K
R356 10K
C345 0.01Z
IC308
PM4007A
AVDD
OPIN
CMIN
AGND
TM4
VDD
DIN
DOUT
DOUTB
C9M
GND
WINGT
SYST0
SYST1
ADST0
ADST1
TMS
BUNR1
AGND
AVDD
GND VDD MUT1 C1F0 C1F1 C2F0 C2F1 T10 OASEL DAIN DAOUT DASYO VLDY T15 MUTO PDO15 T14 PD0 TD0 TRP TCK TL08 T13 T12 VOUT VIN TI1 GND VDD D0
D1 D2 D3 D4 D5 D6 D7 A10 OEB A11 GND A9 A8 A13 WEB A14 A12 VDD GND A7
GND VDD RESET DSCON DATA MCK MLTB IDST IDCK IDO TMO ECCK DEY DRY MSYC TM1 A0 A1 A2 A3 A4 A5 TM3 XIN XOUT NEXT GND VDD A6
R392 0
R393 0
R394 0
R395 0
R396 0
R397 0
R398 0
R385 0
R384 0
R383 0
R382 0
R381 0
R380 0
R379 0
R378 0
R377 0
C364 OPEN
C365 OPEN
IC306
BR62256F-70LL
I/O3 I/O4 I/O5 I/O6 I/O7 CS A10 OE A11 A9 A8 A13 WE VCC GND I/O2 I/O1 I/O0 A0 A1 A2 A3 A4 A5 A6 A7 A12 A14
C351 0.1Z
C352 10/16
C353 0.1Z
C349 0.1Z
R365 10K
R364 10K
R366 10K
R371 0
R372 0
R373 0
R374 0
R375 0
R376 0
R367 10K
R368 10K
R369 10K
R370 10K
C350 0.01Z
A0 A1 A2 A3 A4 A5 A6


6
7
8
9
10
11
A
B
C
D
E
F
G
H
FB350 ~ FB358
F.B X9
(TO 2/2)
F.GAIN
SUB_SYNC1
MUTE_ERR
A/D_P.D
SEL_CLK
DSP_POWER
FB321
BEADS_INDUCTOR
C362
0.01Z
FB322
BEADS_INDUCTOR
TR308
OPEN
R331
OPEN
R330
OPEN
C324
OPEN
C363
0.01Z
FB323
BEADS_INDUCTOR
D.DATA
F2
F1
F0
SEL
DSP-1
DSP-2
DSP_CLK
DSP_SS
DSP_DATA
DSP_RST
AC-3_RFDET
SEL
F.GAIN
DSP_POWER
IC307
TMP87CM43P-***
P03
P04
P05
P06
P07
P10
P11
P12
P13
P14
P15
P16
P17
P20
TEST
P21
P22
RESET
XIN
XOUT
VSS
VDD
P02
P01
P00
P77
P76
P75
P74
P73
P72
P71
P70
P67
P66
P65
P64
P63
P62
P61
P60
VAREF
R408
0
R409
0
DINB
DINC
DEMOD ON
DEMOD POWER
DEMOD RES
R411
2K
R410
2K
R426
R470
OPEN
OPEN
B.DOWN
SUB_SYNC1
SDA
SCL
+5V(D3)
C379
OPEN
C384
CK1000P
C385
OPEN
C386
C387
CK1000P
CK1000P
C378
56P
X302
4M
C377
56P
C382
CK1000P
C383
CK1000P
C361
CK220P
(TO 2/2)
GND(D2-1)FB
+5V
+5V(D2)
GND(D2-1)
-5V(D2)
-5V
+B LINE
-B LINE
SIGNAL LINE
DSP_UNIT
1U-2998-1(1/2)

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
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WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
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CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
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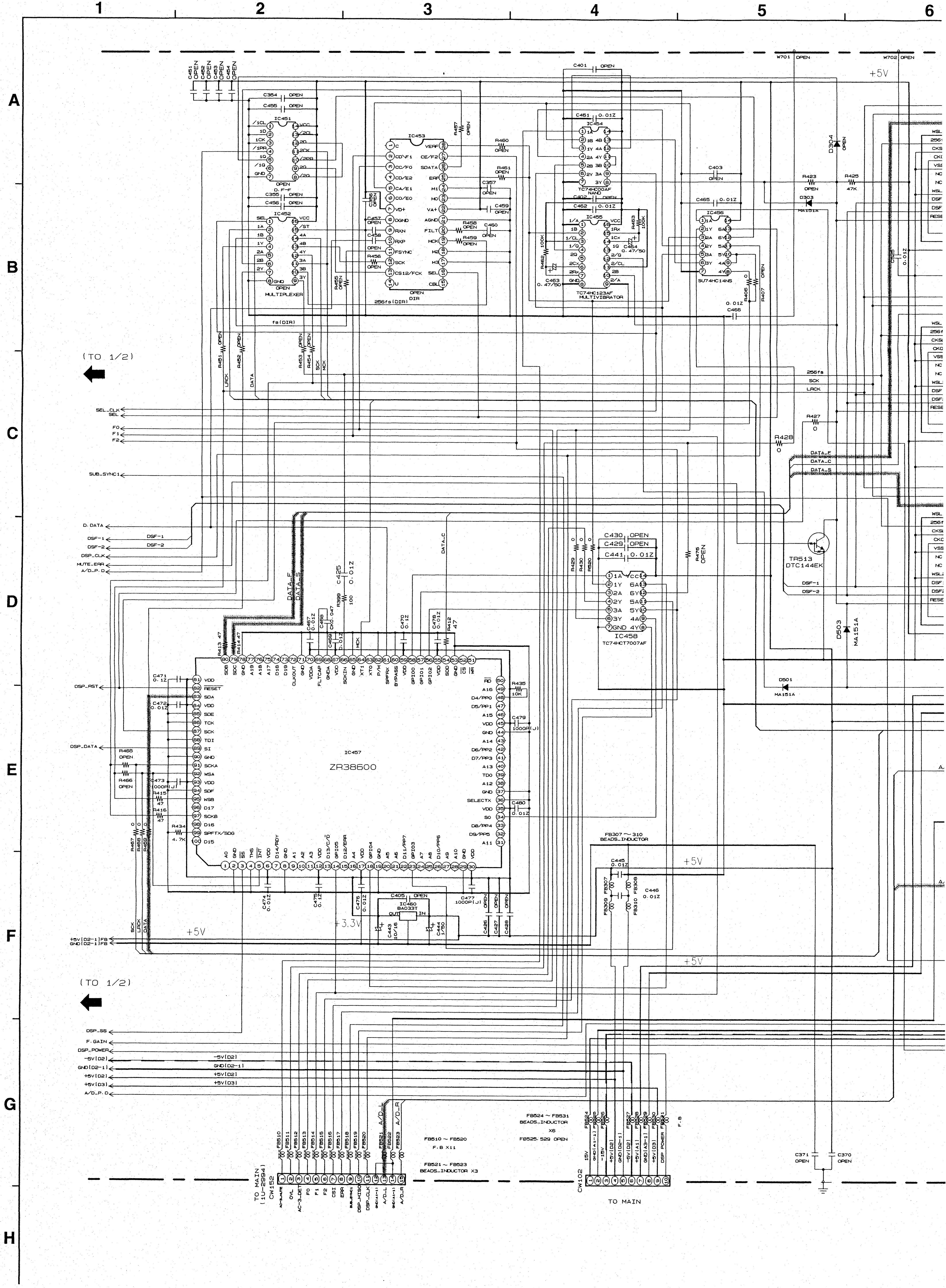
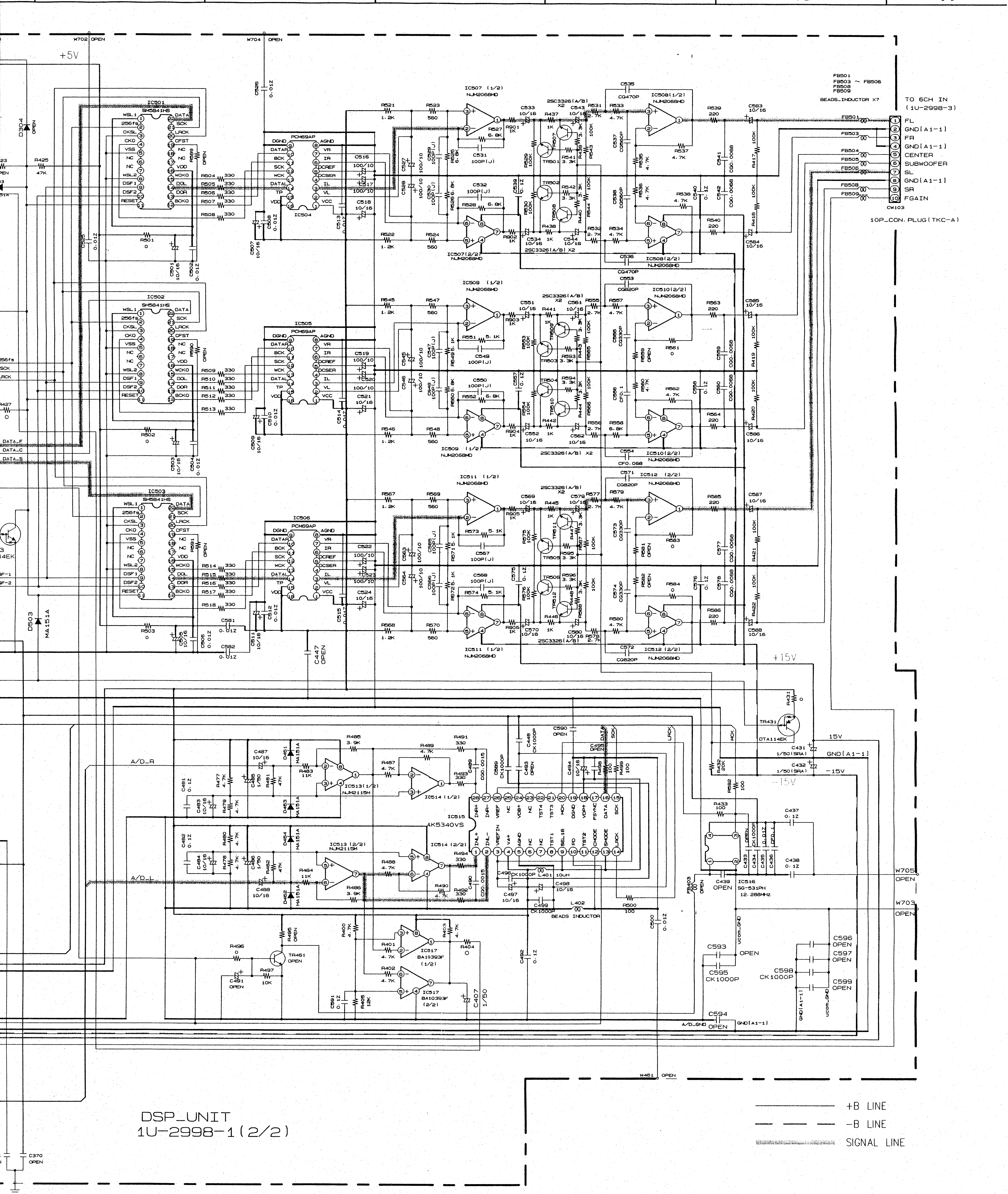
SCHEMATIC DIAGRAM (9/11)


1
2
3
4
5
6
A
B
C
D
E
F
G
H
(TO 1/2)
IC451
D. F-F
IC452
MULTIPLEXER
IC453
DIR
256fs(DIR)
fs(DIR)
IC454
TC74HC00AF
NAND
IC455
TC74HC123AF
MULTIVIBRATOR
IC456
SU74HC14NS
IC457
ZR38600
IC458
TC74HCT7007AF
IC460
BA033T
TR513
DTC144EK
D304
D303
MA151A
D503
MA151A
D501
MA151A
W701 OPEN
W702 OPEN
+5V
+3.3V
SEL_CLK
SEL
F0
F1
F2
SUB_SYNC1
D. DATA
DSF-1
DSF-2
DSP_CLK
MUTE_ERR
A/D_P. D
DSP_RST
DSP_DATA
+5V(D2-1)FB
GND(D2-1)FB
DSP_SS
F. GAIN
DSP_POWER
-5V(D2)
GND(D2-1)
+5V(D2)
+5V(D3)
A/D_P. D
DATA_F
DATA_C
DATA_S
256fs
SCK
LRCK
FB307 ~ 310
BEADS_INDUCTOR
FB510 ~ FB520
F.B X11
FB521 ~ FB523
BEADS_INDUCTOR X3
FB524 ~ FB531
BEADS_INDUCTOR
X6
FB525. 529 OPEN
TO MAIN
(1U-2994)
CW152
CW102
TO MAIN
C370 OPEN
C371 OPEN


+5V
W702 OPEN
W704 OPEN
IC501 SM5841HS
IC502 SM5841HS
IC503 SM5841HS
IC504 PCM69AP
IC505 PCM69AP
IC506 PCM69AP
IC507 (1/2) NJM2068MD
IC507 (2/2) NJM2068MD
IC508 (1/2) NJM2068MD
IC508 (2/2) NJM2068MD
IC509 (1/2) NJM2068MD
IC510 (2/2) NJM2068MD
IC511 (1/2) NJM2068MD
IC512 (2/2) NJM2068MD
2SC3326(A/B) X2
FB501 FB503 ~ FB506 FB508 FB509 BEADS_INDUCTOR X7
TO 6CH IN (1U-2998-3)
① FL
② GND(A1-1)
③ FR
④ GND(A1-1)
⑤ CENTER
⑥ SUBWOOFER
⑦ SL
⑧ GND(A1-1)
⑨ SR
⑩ FGAIN
CW103
10P_CON. PLUG(TKC-A)
D304 OPEN
D503 MA151A
DATA_F
DATA_C
DATA_S
A/D_R
A/D_L
IC513 (1/2) NJM2115M
IC513 (2/2) NJM2115M
IC514 (1/2)
IC514 (2/2)
IC515 AK5340VS
IC516 SG-531PH 12.288MHz
IC517 BA10393F (1/2)
IC517 BA10393F (2/2)
TR431 DTA114EK
TR461
+15V
15V
GND(A1-1)
-15V
L401 10uH
L402 BEADS INDUCTOR
W705 OPEN
W703 OPEN
W461 OPEN
A/D_GND
GND(A1-1)
C447 OPEN
C370 OPEN

DSP_UNIT
1U-2998-1(2/2)

———————	+B LINE
— — — —	-B LINE
▨▨▨▨▨▨▨	SIGNAL LINE

NOTES

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

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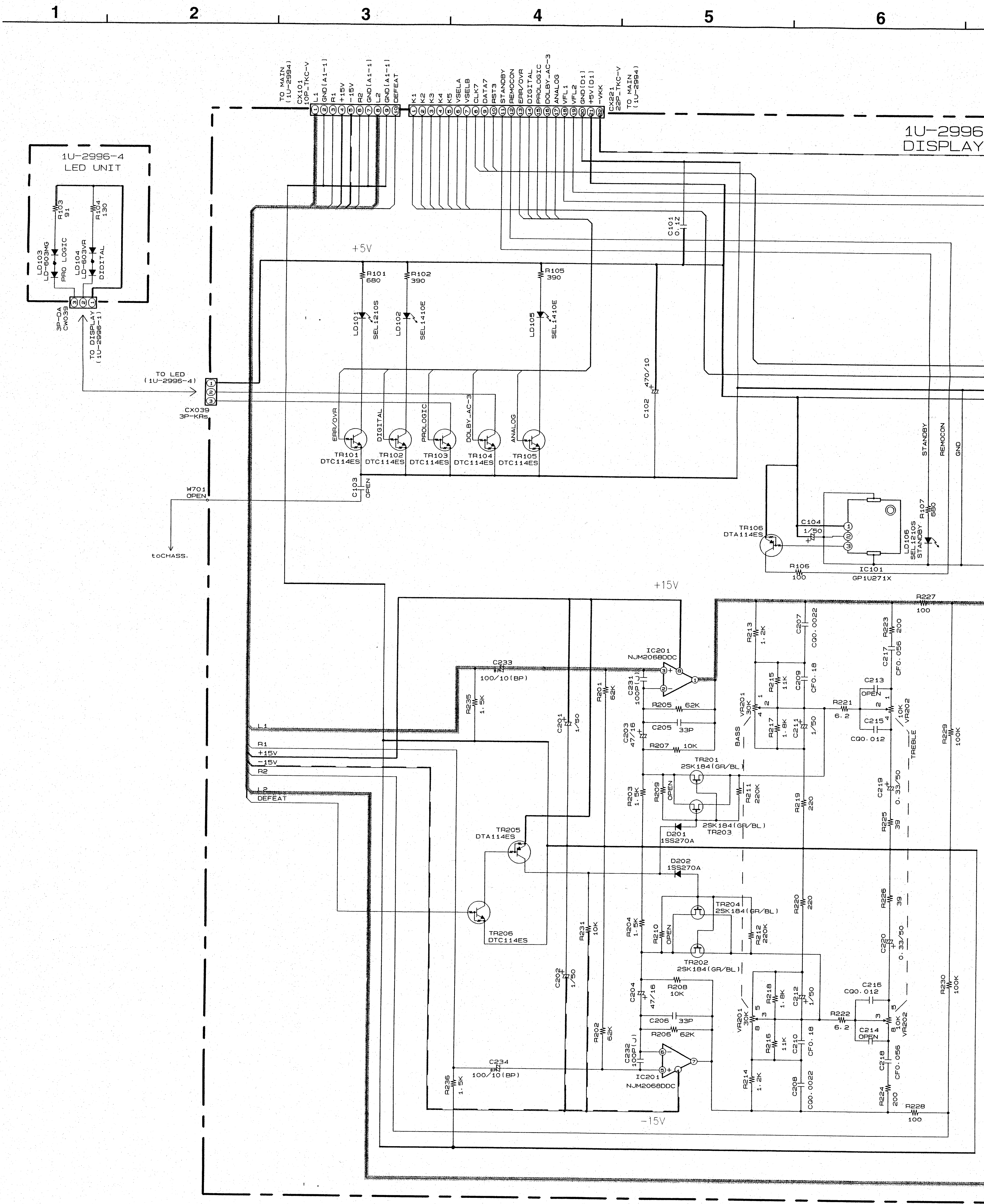
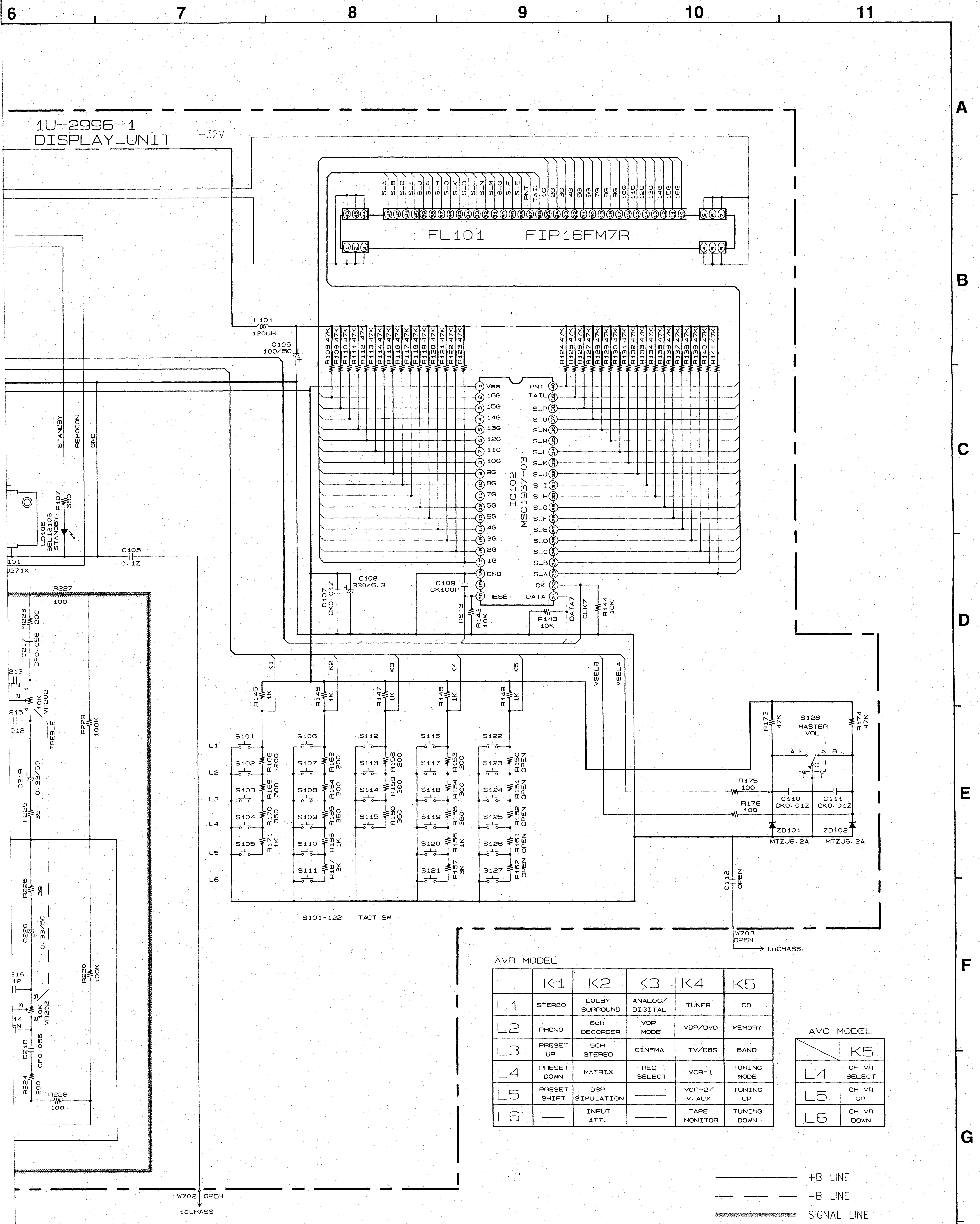
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM (10/11)



1
2
3
4
5
6
TO MAIN (1U-2994)
CX101 10P_TKC-V
L1
GND(A1-1)
R1
+15V
-15V
R2
GND(A1-1)
L2
GND(A1-1)
DEFEAT
K1
K2
K3
K4
K5
VSELA
VSELB
CLK7
DATA7
RST3
STANDBY
REMOCON
ERR/OVR
DIGITAL
PROLOGIC
DOLBY_AC-3
ANALOG
VFL1
VFL2
GND(D1)
+5V(D1)
-VKK
CX221 22P_TKC-V
TO MAIN (1U-2994)
1U-2996
DISPLAY
1U-2996-4
LED UNIT
R103 91
R104 130
LD103 LD-603MG
PRO LOGIC
LD104 LD-603VR
DIGITAL
3P-DA CW039
TO DISPLAY (1U-2996-1)
TO LED (1U-2996-4)
CX039 3P-KRs
W701 OPEN
toCHASS.
+5V
R101 680
R102 390
R105 390
LD101 SEL1210S
LD102 SEL1410E
LD105 SEL1410E
C101 0.1Z
C102 470/10
ERR/OVR
DIGITAL
PROLOGIC
DOLBY_AC-3
ANALOG
TR101 DTC114ES
TR102 DTC114ES
TR103 DTC114ES
TR104 DTC114ES
TR105 DTC114ES
C103 OPEN
STANDBY
REMOCON
GND
TR106 DTA114ES
C104 1/50
R106 100
IC101 GP1U271X
R107 680
LD106 SEL1210S STANDBY
+15V
R227 100
IC201 NJM2068DDC
C233 100/10(BP)
R235 1.5K
C201 1/50
R201 62K
C231 100P(J)
R205 62K
C205 33P
C203 47/16
R207 10K
R213 1.2K
C207 CQ0.0022
R215 11K
C209 CF0.18
VR201 30K
BASS
R217 1.8K
C211 1/50
R221 6.2
C213 OPEN
C215 CQ0.012
VR202 10K
TREBLE
R223 200
C217 CF0.056
R229 100K
L1
R1
+15V
-15V
R2
L2
DEFEAT
TR201 2SK184(GR/BL)
R203 1.5K
R209 OPEN
R211 220K
2SK184(GR/BL) TR203
D201 1SS270A
R219 220
C219 0.33/50
R225 39
TR205 DTA114ES
D202 1SS270A
TR204 2SK184(GR/BL)
TR206 DTC114ES
R231 10K
R204 1.5K
R210 OPEN
R212 220K
R220 220
R226 39
C220 0.33/50
TR202 2SK184(GR/BL)
C202 1/50
C204 47/16
R208 10K
R218 1.8K
C212 1/50
C216 CQ0.012
R230 100K
C206 33P
R206 62K
R202 62K
R222 6.2
C214 OPEN
R216 11K
C210 CF0.18
C232 100P(J)
C234 100/10(BP)
R236 1.5K
IC201 NJM2068DDC
R214 1.2K
C208 CQ0.0022
C218 CF0.056
R224 200
R228 100
-15V


6
7
8
9
10
11
A
B
C
D
E
F
G
1U-2996-1
DISPLAY_UNIT
-32V
FL101 FIP16FM7R
IC102
MSC1937-03
L101 120uH
C106 100/50
C105 0.1Z
C107 CK0.01Z
C108 330/6.3
C109 CK100P
R142 10K
R143 10K
R144 10K
RST3
DATA7
CLK7
VSS
RESET
DATA
CK
GND
PNT
TAIL
STANDBY
REMOCON
GND
LD105 SEL1210S STANDBY
R107 680
K1
K2
K3
K4
K5
VSELB
VSELA
L1
L2
L3
L4
L5
L6
S101-122 TACT SW
S128 MASTER VOL
R173 47K
R174 47K
R175 100
R176 100
C110 CK0.01Z
C111 CK0.01Z
ZD101 MTZJ6.2A
ZD102 MTZJ6.2A
C112 OPEN
W703 OPEN
toCHASS.
W702 OPEN
toCHASS.
R227 100
R228 100
R229 100K
R230 100K
VR202 10K
TREBLE
+B LINE
-B LINE
SIGNAL LINE

AVR MODEL

	K1	K2	K3	K4	K5
L1	STEREO	DOLBY SURROUND	ANALOG/ DIGITAL	TUNER	CD
L2	PHONO	6ch DECORDER	VDP MODE	VDP/DVD	MEMORY
L3	PRESET UP	5CH STEREO	CINEMA	TV/DBS	BAND
L4	PRESET DOWN	MATRIX	REC SELECT	VCR-1	TUNING MODE
L5	PRESET SHIFT	DSP SIMULATION	——	VCR-2/ V. AUX	TUNING UP
L6	——	INPUT ATT.	——	TAPE MONITOR	TUNING DOWN

AVC MODEL

	K5
L4	CH VR SELECT
L5	CH VR UP
L6	CH VR DOWN

NOTES

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

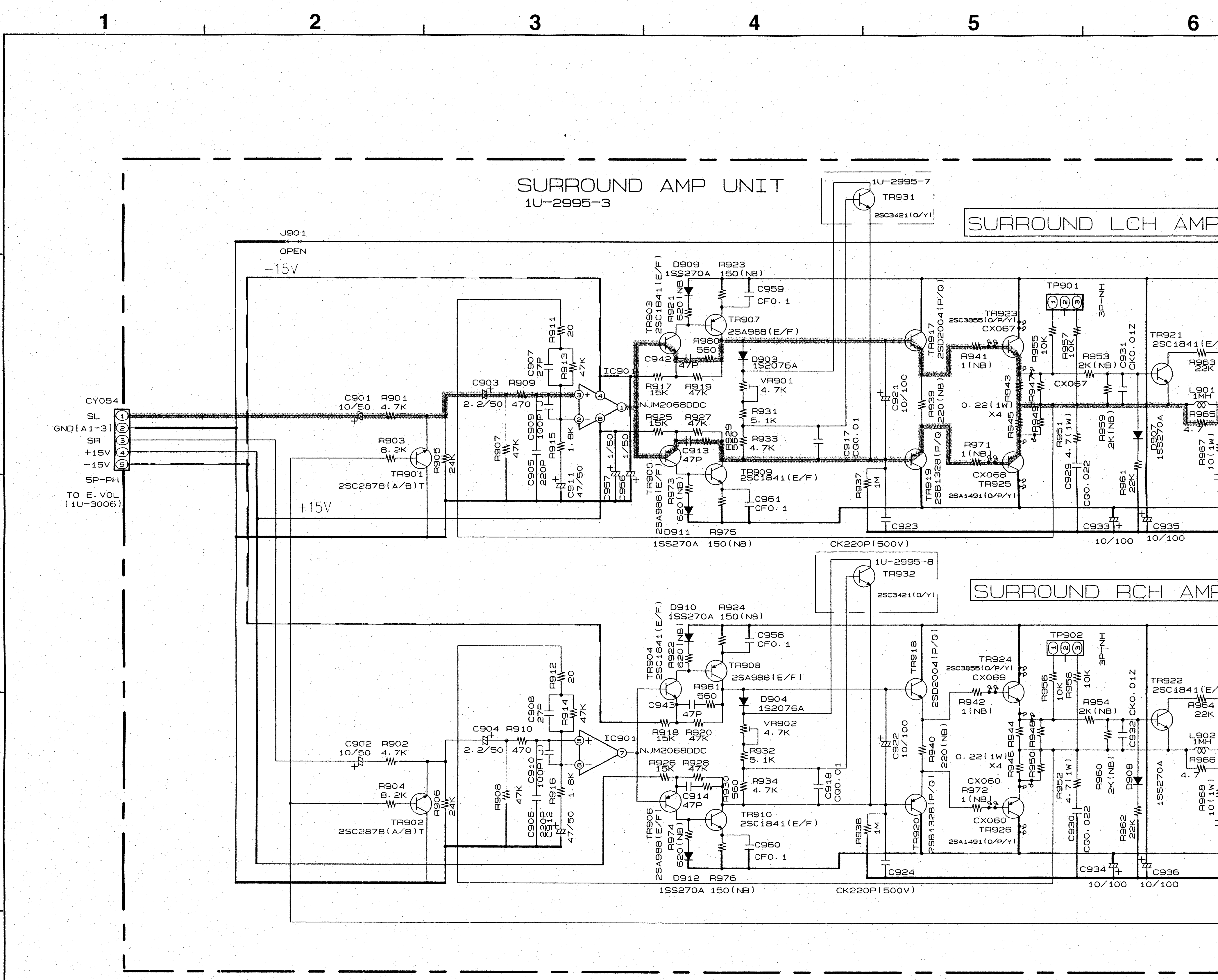
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM (11/11)


1
2
3
4
5
6
A
B
C
D
SURROUND AMP UNIT
1U-2995-3
1U-2995-7
TR931
2SC3421(O/Y)
SURROUND LCH AMP
1U-2995-8
TR932
2SC3421(O/Y)
SURROUND RCH AMP
J901
OPEN
-15V
+15V
CY054
SL
GND(A1-3)
SR
+15V
-15V
5P-PH
TO E.VOL
(1U-3006)
C901 10/50
R901 4.7K
C902 10/50
R902 4.7K
R903 8.2K
R904 8.2K
TR901 2SC2878(A/B)T
TR902 2SC2878(A/B)T
R905 24K
R906 24K
C903 2.2/50
R909 470
C904 2.2/50
R910 470
C907 27P
C908 27P
R911 20
R912 20
R913 47K
R914 47K
R907 47K
R908 47K
C909 100P
C910 100P
C905 220P
C906 220P
R915 1.8K
R916 1.8K
C911 47/50
C912 47/50
C957 1/50
C955 1/50
IC901
NJM2068DDC
D909 1SS270A
D910 1SS270A
R923 150(NB)
R924 150(NB)
TR903 2SC1841(E/F)
TR904 2SC1841(E/F)
R921 620(NB)
R922 620(NB)
C959 CF0.1
C958 CF0.1
TR907 2SA988(E/F)
TR908 2SA988(E/F)
R980 560
R981 560
C942 47P
C943 47P
D903 1S2076A
D904 1S2076A
VR901 4.7K
VR902 4.7K
R917 15K
R919 47K
R918 15K
R920 47K
R925 15K
R927 47K
R926 15K
R928 47K
R929 560
R930 560
R931 5.1K
R932 5.1K
R933 4.7K
R934 4.7K
C913 47P
C914 47P
TR905 2SA988(E/F)
TR906 2SA988(E/F)
R973 620(NB)
R974 620(NB)
TR909 2SC1841(E/F)
TR910 2SC1841(E/F)
C961 CF0.1
C960 CF0.1
D911 1SS270A
D912 1SS270A
R975 150(NB)
R976 150(NB)
C917 CQ0.01
C918 CQ0.01
R937 1M
R938 1M
C923
C924
CK220P(500V)
TR917 2SD2004(P/Q)
TR918 2SD2004(P/Q)
TR919 2SB1328(P/Q)
TR920 2SB1328(P/Q)
C921 10/100
C922 10/100
R939 220(NB)
R940 220(NB)
TR923 2SC3855(O/P/Y)
TR924 2SC3855(O/P/Y)
CX067
CX069
R941 1(NB)
R942 1(NB)
R943
R944
0.22(1W) X4
R945
R946
R947
R948
R949
R950
R971 1(NB)
R972 1(NB)
CX068
CX060
TR925 2SA1491(O/P/Y)
TR926 2SA1491(O/P/Y)
TP901
TP902
3P-NH
R955 10K
R956 10K
R957 10K
R958 10K
R953 2K(NB)
R954 2K(NB)
C931 CK0.012
C932 CK0.012
R951 4.7(1W)
R952 4.7(1W)
R959 2K(NB)
R960 2K(NB)
C929 CQ0.022
C930 CQ0.022
R961 22K
R962 22K
D907 1SS270A
D908 1SS270A
C933 10/100
C934 10/100
C935 10/100
C936 10/100
TR921 2SC1841(E/
TR922 2SC1841(E/
R963 22K
R964 22K
L901 1MH
L902 1MH
R965
R966
R967 10(1W)
R968 10(1W)

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
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WARNING:
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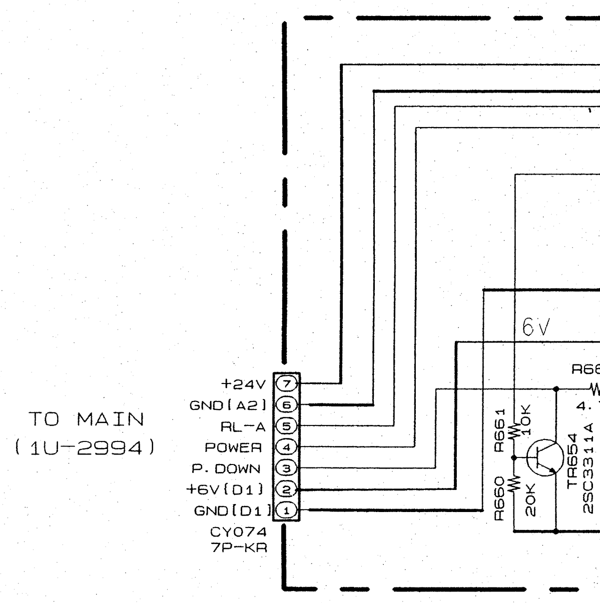
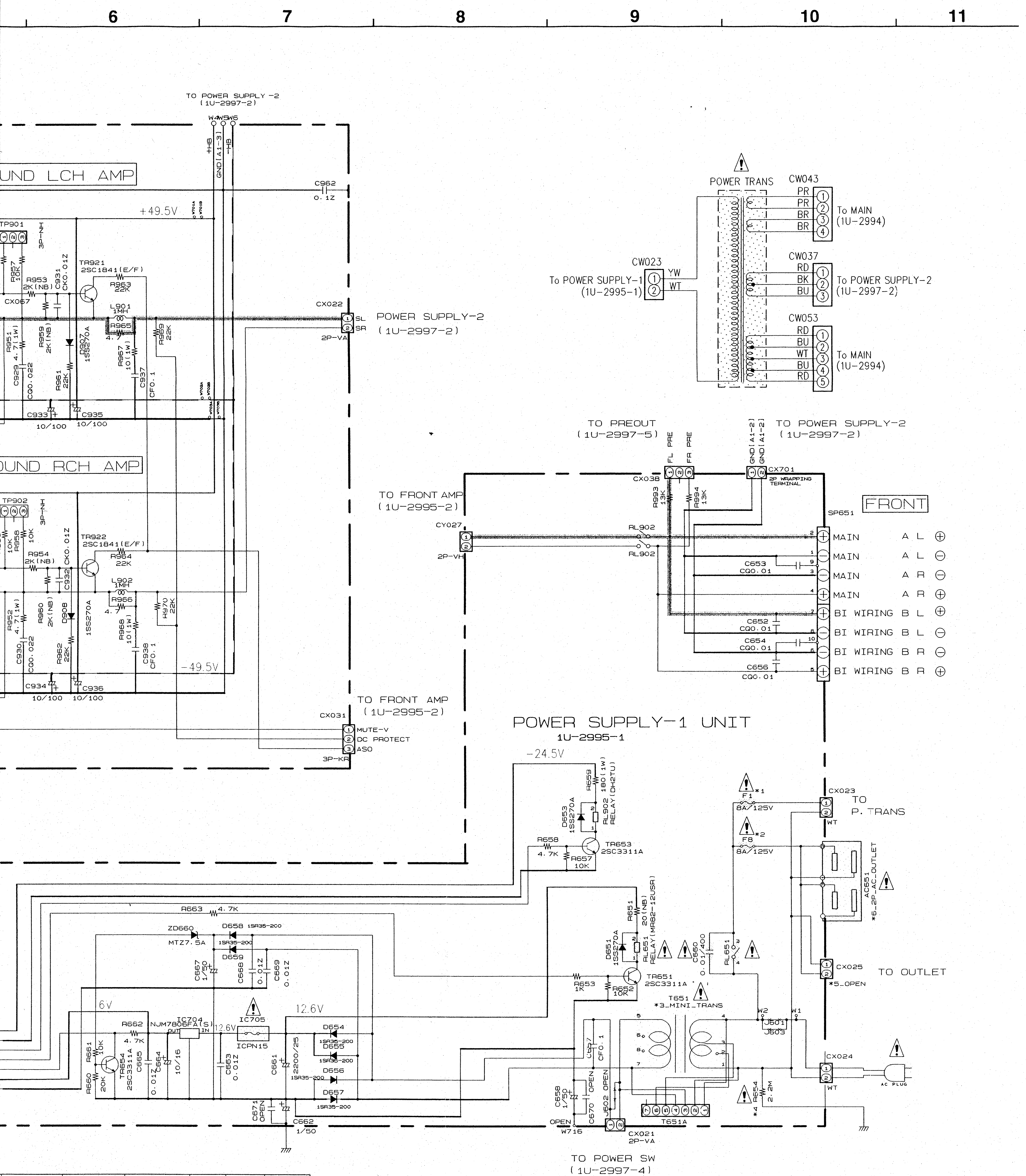

E
F
G
6V
TO MAIN
(1U-2994)
+24V
GND(A2)
RL-A
POWER
P. DOWN
+6V(D1)
GND(D1)
CY074
7P-KR
R661 10K
R660 20K
TR654 2SC3311A

	*1 F1	*2 F8
* USA CANADA	8A/125V 2041046014	8A/125V 2061046014
ASIA	4A/250V 2061015087	2.5A/250V 2061015032
EUROPE	4A/250V 2061015087	2.5A/250V 2061015032
JAPAN	8A/125V 2061052008	8A/125V 2061052008



6
7
8
9
10
11
TO POWER SUPPLY -2
(1U-2997-2)
W4
W5
W6
+HB
GND(A1-3)
-HB
UND LCH AMP
C962
0.1Z
+49.5V
TP901
3P-NH
R957
10K
R953
2K(NB)
C931
CK0.01Z
TR921
2SC1841(E/F)
R963
22K
CX067
L901
1MH
R965
4.7
R969
22K
CX022
SL
SR
2P-VA
POWER SUPPLY-2
(1U-2997-2)
R951
4.7(1W)
R959
2K(NB)
D907
1SS270A
R967
10(1W)
C929
CQ0.022
R961
22K
C937
CF0.1
C933
C935
10/100
10/100
UND RCH AMP
TP902
3P-NH
R958
10K
R954
2K(NB)
C932
CK0.01Z
TR922
2SC1841(E/F)
R964
22K
L902
1MH
R966
4.7
R970
22K
R952
4.7(1W)
R960
2K(NB)
D908
1SS270A
R968
10(1W)
C930
CQ0.022
R962
22K
C938
CF0.1
-49.5V
C934
C936
10/100
10/100
TO FRONT AMP
(1U-2995-2)
CX031
MUTE-V
DC PROTECT
ASO
3P-KR
POWER TRANS
CW043
PR
PR
BR
BR
To MAIN
(1U-2994)
CW023
To POWER SUPPLY-1
(1U-2995-1)
YW
WT
CW037
RD
BK
BU
To POWER SUPPLY-2
(1U-2997-2)
CW053
RD
BU
WT
BU
RD
To MAIN
(1U-2994)
TO PREOUT
(1U-2997-5)
FL PRE
FR PRE
GND(A1-2)
GND(A1-2)
TO POWER SUPPLY-2
(1U-2997-2)
CX038
CX701
2P WRAPPING TERMINAL
R993
13K
R994
13K
TO FRONT AMP
(1U-2995-2)
CY027
2P-VH
RL902
RL902
FRONT
SP651
MAIN A L ⊕
MAIN A L ⊖
MAIN A R ⊖
MAIN A R ⊕
BI WIRING B L ⊕
BI WIRING B L ⊖
BI WIRING B R ⊖
BI WIRING B R ⊕
C653
CQ0.01
C652
CQ0.01
C654
CQ0.01
C656
CQ0.01
POWER SUPPLY-1 UNIT
1U-2995-1
-24.5V
R659
180(1W)
RL902
RELAY(DH2TU)
D653
1SS270A
R658
4.7K
TR653
2SC3311A
R657
10K
F1
8A/125V
*1
CX023
TO
P.TRANS
WT
F8
8A/125V
*2
AC651
*5_2P_AC_OUTLET
R663
4.7K
ZD660
MTZ7.5A
D658
1SR35-200
1SR35-200
D659
C667
1/50
C668
0.01Z
C669
0.01Z
R651
20(NB)
RL651
RELAY(MR82-12USR)
D651
1SS270A
C650
0.01/400
RL651
CX025
*5_OPEN
TO OUTLET
R653
1K
R652
10K
TR651
2SC3311A
T651
*3_MINI_TRANS
6V
12.6V
R662
4.7K
IC704
NJM7806FA(S)
OUT
IN
12.6V
IC705
ICPN15
D654
1SR35-200
D655
1SR35-200
D656
1SR35-200
D657
1SR35-200
R661
10K
R660
20K
TR654
2SC3311A
C665
0.01Z
C664
10/16
C663
0.01Z
C661
2200/25
C671
OPEN
C662
1/50
C657
CF0.1
C658
1/50
C670
OPEN
J502
OPEN
OPEN
W716
CX021
2P-VA
W2
W1
J601
J603
CX024
WT
AC PLUG
R654
2.2M
*4
T651A
TO POWER SW
(1U-2997-4)

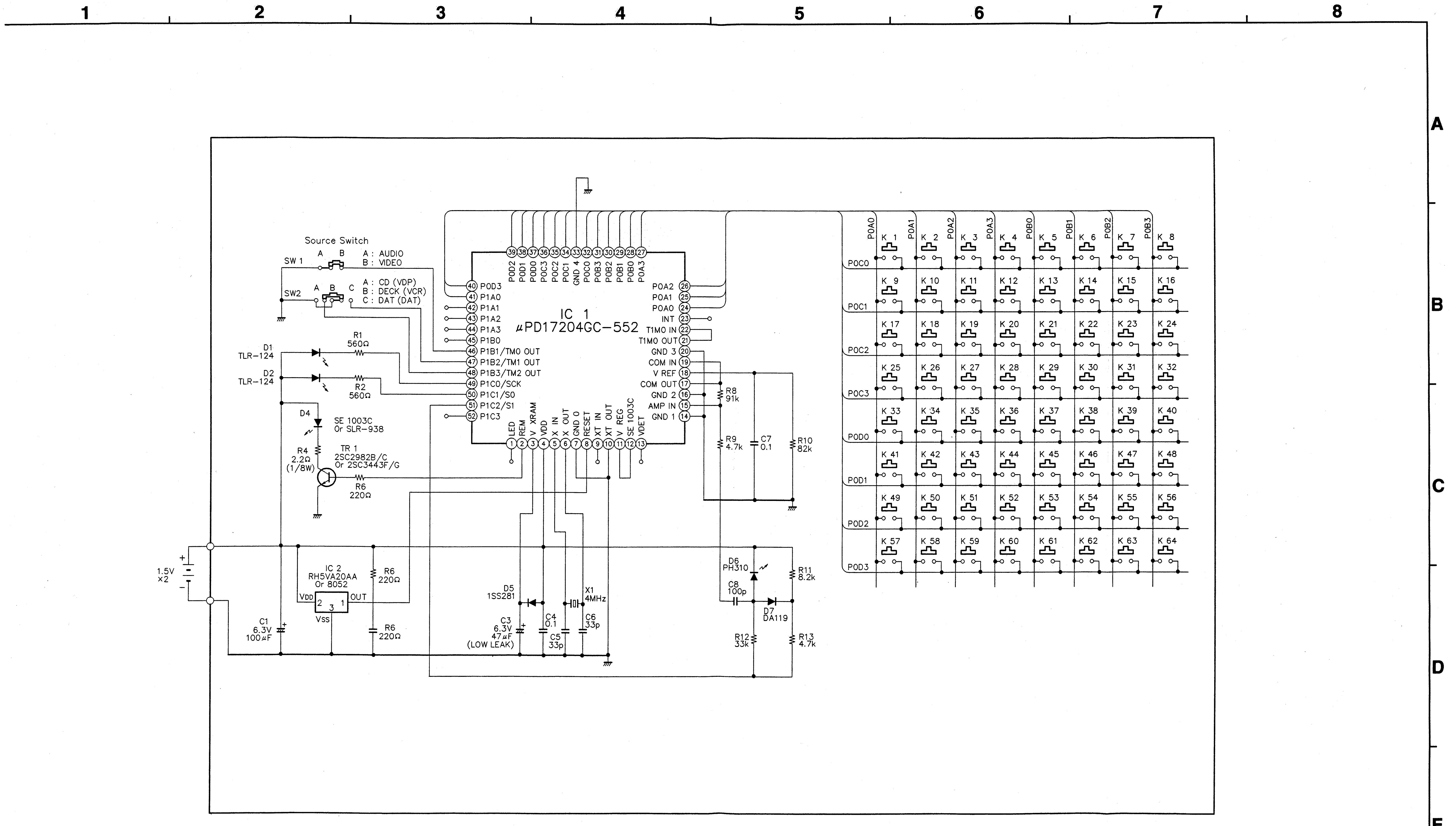
	*1 F1	*2 F8	*3 T651	*4 R654	*5 CX025	*5 AC651
	8A/125V 2041046014	8A/125V 2061046014	2335818004	2.2M	—	2P AC OUTLET
	4A/250V 2061015087	2.5A/250V 2061015032	2336074009	—	2P-VH	—
	4A/250V 2061015087	2.5A/250V 2061015032	2336074009	—	2P-VH	—
	8A/125V 2061052008	8A/125V 2061052008	2330362005	—	—	2P AC OUTLET

——— +B LINE

— — — -B LINE

▨ SIGNAL LINE

REMOTE CONTROL UNIT (RC-825)


1
2
3
4
5
6
7
8
A
B
C
D
E
Source Switch
SW 1
SW2
A : AUDIO
B : VIDEO
A : CD (VDP)
B : DECK (VCR)
C : DAT (DAT)
IC 1
μPD17204GC-552
P0D3
P1A0
P1A1
P1A2
P1A3
P1B0
P1B1/TM0 OUT
P1B2/TM1 OUT
P1B3/TM2 OUT
P1C0/SCK
P1C1/SO
P1C2/SI
P1C3
P0A2
P0A1
P0A0
INT
T1M0 IN
T1M0 OUT
GND 3
COM IN
V REF
COM OUT
GND 2
AMP IN
GND 1
P0D2
P0D1
P0D0
P0C3
P0C2
P0C1
GND 4
P0C0
P0B3
P0B2
P0B1
P0B0
P0A3
LED
REM
V XRAM
VDD
X IN
X OUT
GND 0
RESET
XT IN
XT OUT
V REG
SE 1003C
VDET
D1 TLR-124
D2 TLR-124
R1 560Ω
R2 560Ω
D4 SE 1003C Or SLR-938
R4 2.2Ω (1/8W)
TR 1 2SC2982B/C Or 2SC3443F/G
R6 220Ω
1.5V ×2
IC 2 RH5VA20AA Or 8052
VDD
OUT
VSS
C1 6.3V 100μF
R6 220Ω
R6 220Ω
D5 1SS281
C3 6.3V 47μF (LOW LEAK)
C4 0.1
C5 33p
X1 4MHz
C6 33p
R8 91k
R9 4.7k
C7 0.1
R10 82k
D6 PH310
C8 100p
D7 DA119
R11 8.2k
R12 33k
R13 4.7k
P0A0
P0A1
P0A2
P0A3
P0B0
P0B1
P0B2
P0B3
P0C0
P0C1
P0C2
P0C3
P0D0
P0D1
P0D2
P0D3
K 1
K 2
K 3
K 4
K 5
K 6
K 7
K 8
K 9
K 10
K 11
K 12
K 13
K 14
K 15
K 16
K 17
K 18
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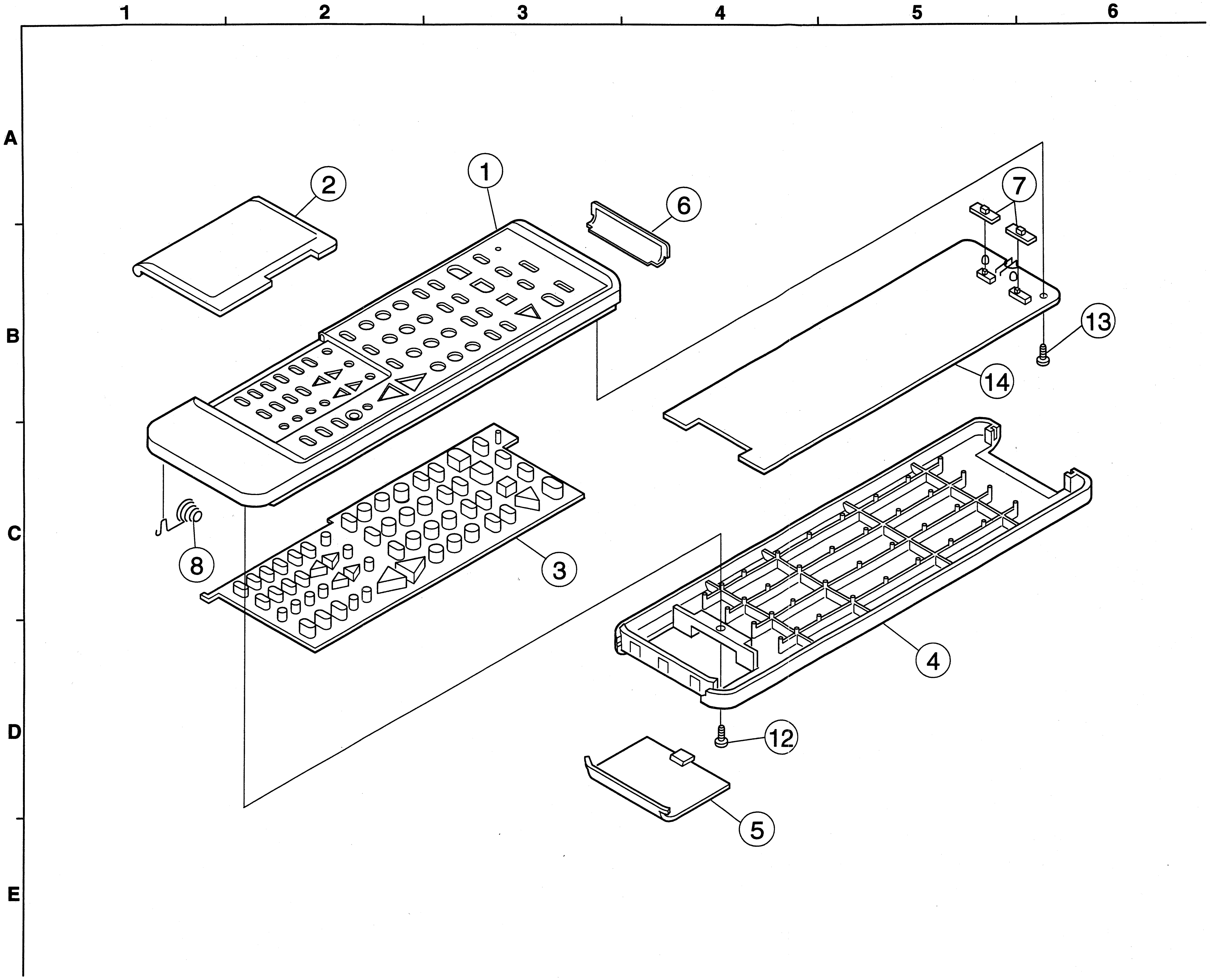
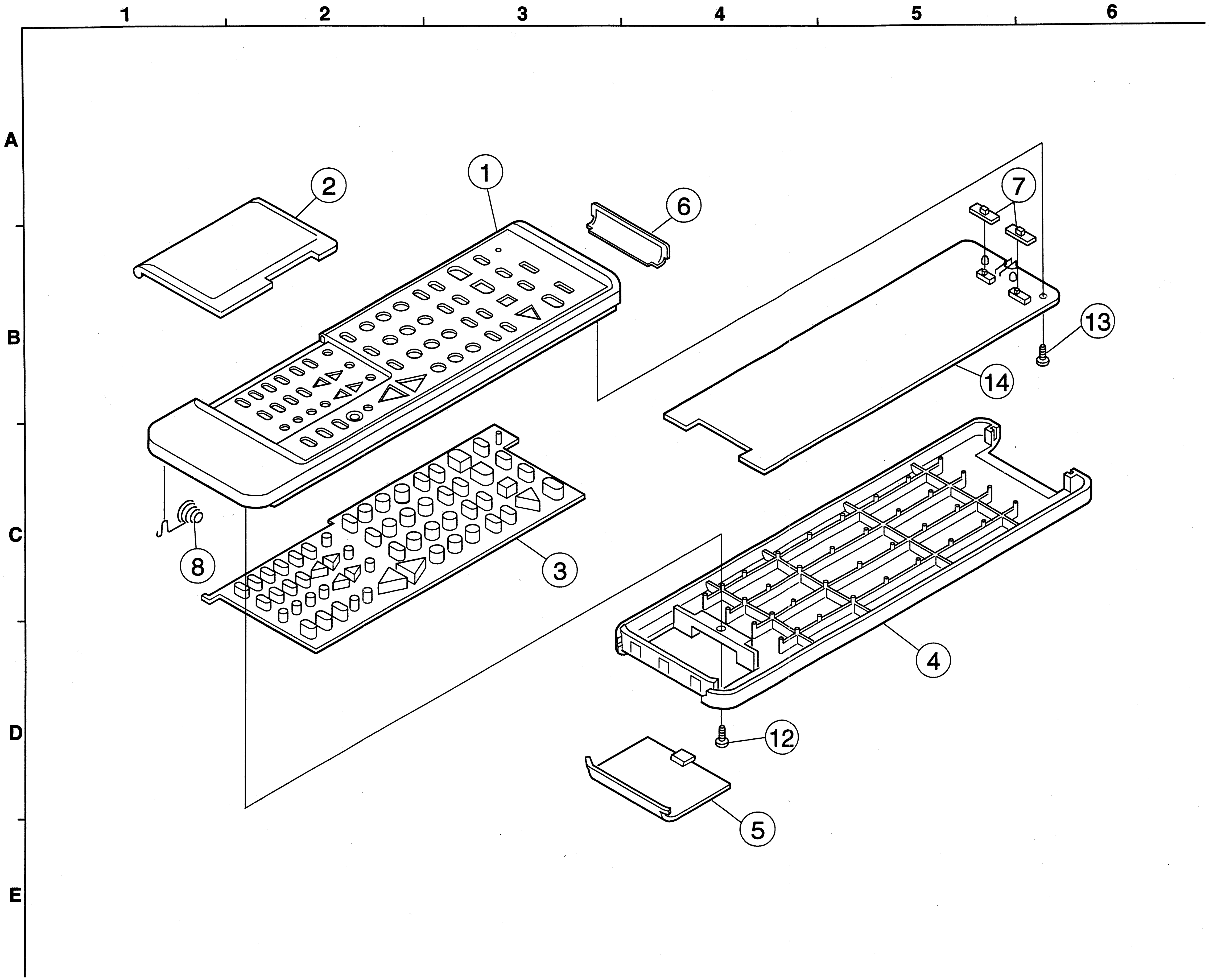
K 63
K 64



PARTS LIST OF REMOTE CONTROL UNIT (RC-825)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
⊙ 1	9H3 1000 164	Top Case (RC825) Ass'y		1s
⊙ 2	9H3 100 0 168	Cover		1
⊙ 3	9H3 1000 169	Switch Rubber		1
⊙ 4	9H3 1000 166	Bottom Case		1
⊙ 5	9H3 1000 167	Battery Cover		1
⊙ 6	9H3 1000 148	Filter		1
7	9H3 1000 150	Slide Knob		2
8	9H3 1000 152	Coil Spring		1
9	—	—		
10	—	—		
11	—	—		
12	9H3 1000 154	Tapping Screw 2x6		1
13	9H3 1000 107	Tapping Screw 2x5		1
14	9H3 1000 161	Main P.W.B. Ass'y		1s
IC1	9H3 1000 162	IC µPD17204GC-552	µ-Com	1
IC2	9H3 1000 158	IC RH5VA10AA	vol. Detector	1
Q1	9H3 1000 070	Transistor 2SC2982	Chip	1
D1,2	9H3 1000 028	LED TLR124	Visible-Red	2
D4	9H3 1000 131	LED SE1003-C	Inflared	1
D5	9H3 1000 087	Diode 1SS2B1		1
D6	9H3 1000 029	Diode PH310	Photo-PIN	1
D7	9H3 1000 071	Diode DA119	Chip	1
X1	9H3 1000 088	Ceramic Resonator	KBR4, 0M503	1
SW1	9H3 1000 089	Slide Switch		1
SW2	9H3 1000 074	Slide Switch		1
C1	254 4213 034	Electrolytic 100µF/6.3V	CE04W0J101M	1
C3	254 4213 021	Electrolytic 47µF/6.3V	CE04W0J470M	1



PARTS LIST OF REMOTE CONTROL UNIT (RC-825)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
⊙ 1	9H3 1000 164	Top Case (RC825) Ass'y		1s
⊙ 2	9H3 100 0 168	Cover		1
⊙ 3	9H3 1000 169	Switch Rubber		1
⊙ 4	9H3 1000 166	Bottom Case		1
⊙ 5	9H3 1000 167	Battery Cover		1
⊙ 6	9H3 1000 148	Filter		1
7	9H3 1000 150	Slide Knob		2
8	9H3 1000 152	Coil Spring		1
9	—	—		
10	—	—		
11	—	—		
12	9H3 1000 154	Tapping Screw 2x6		1
13	9H3 1000 107	Tapping Screw 2x5		1
14	9H3 1000 161	Main P.W.B. Ass'y		1s
IC1	9H3 1000 162	IC µPD17204GC-552	µ-Com	1
IC2	9H3 1000 158	IC RH5VA10AA	vol. Detector	1
Q1	9H3 1000 070	Transistor 2SC2982	Chip	1
D1,2	9H3 1000 028	LED TLR124	Visible-Red	2
D4	9H3 1000 131	LED SE1003-C	Inflared	1
D5	9H3 1000 087	Diode 1SS2B1		1
D6	9H3 1000 029	Diode PH310	Photo-PIN	1
D7	9H3 1000 071	Diode DA119	Chip	1
X1	9H3 1000 088	Ceramic Resonator	KBR4, 0M503	1
SW1	9H3 1000 089	Slide Switch		1
SW2	9H3 1000 074	Slide Switch		1
C1	254 4213 034	Electrolytic 100µF/6.3V	CE04W0J101M	1
C3	254 4213 021	Electrolytic 47µF/6.3V	CE04W0J470M	1

DENON

DENON ORIGINAL ERSATZTEILE ORIGINAL SPAREPARTS
Lagerort / Warehouse Location E018C04C
Lieferschein-Nr / Delivery Note No 0250412708
Menge / Quantity 1
Ihre Ref.-Nr. / Your Ref. No 055201000
Datum / Date 24.05.2006
Artikel / Article SERVICE MANUAL AVR3200
SMAVR3200

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Telephone: 03 (3584) 8111
Cable: NIPPON COLUMBIA TOKYO Telex: JAPANOLA J22591

Printed in Japan

DENON

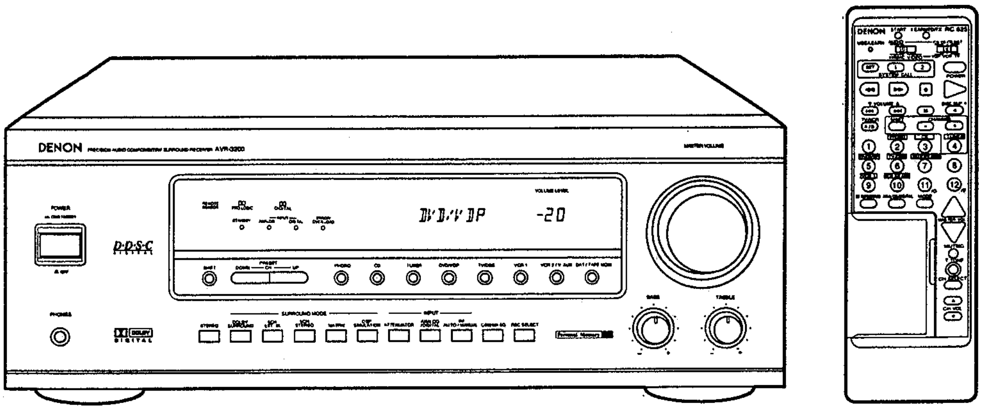
Hi-Fi AV Surround Receiver

For Europe and Asia Models

SERVICE MANUAL

MODEL AVR-3200/3200G

AV SURROUND RECEIVER



AVR-3200G has the accessories with wood board.

This service manual is supplement for Europe and Asia models. For servicing, refer to the service manual of AVR-3200 (For U.S.A./Canada model) already issued at the same time.

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ADDENDUM PARTS LIST OF EXPLODED VIEW 2
EXPLODED VIEW 3
ADDENDUM PARTS LIST OF PRINTED WIRING BOARD .... 4~6
SCHEMATIC DIAGRAM .... 7~11

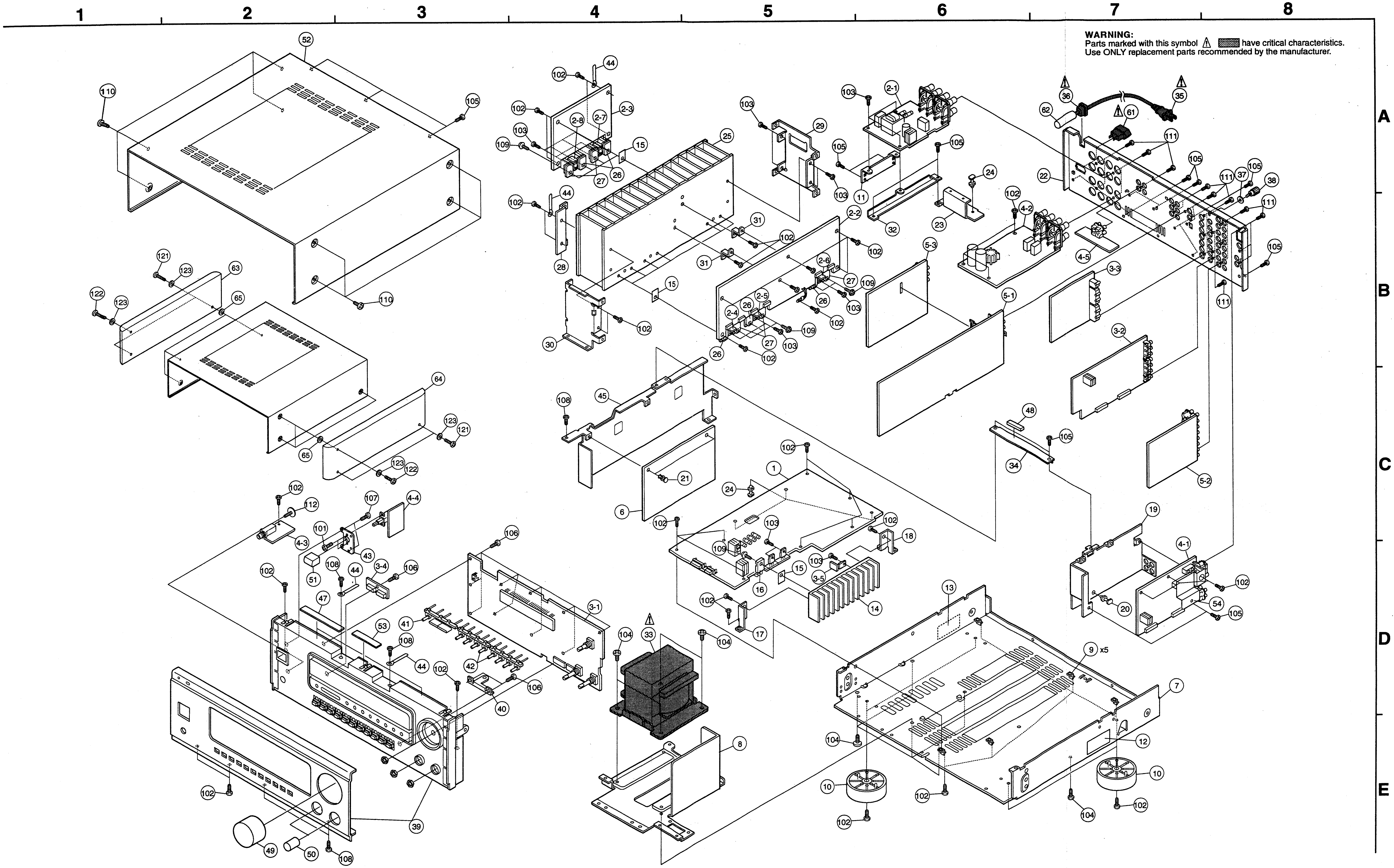
- In order to explain clearly, some illustrations using in this service manual may be slightly different from the actual set.

NIPPON COLUMBIA CO., LTD.

ADDENDUM PARTS LIST OF EXPLODED VIEW

Ref No.	Part Name	Part No.			
		U.S.A. Model	Europe Model	Asia Black Model	Asia Gold Model
22	Back panel	105 1225 202	105 1225 228	105 1225 228	105 1225 231
33	Power trans.	233 6220 002	233 6224 008	233 6224 008	233 6224 008
35	AC cord	206 2060 002	206 2063 009	206 2063 009	206 2063 009
39	Inner panel Ass'y	146 1669 209	146 1669 225	146 1669 225	146 1669 335
41	Tuning knob	113 1804 006	113 1804 006	113 1804 006	113 1804 019
42	Function knob	113 1805 005	113 1805 005	113 1805 005	113 1805 018
49	VR. knob Ass'y	112 0744 038	112 0744 038	112 0744 038	112 0744 041
50	Knob (MARU)	112 0685 100	112 0685 100	112 0685 100	112 0685 113
51	P. knob (P) Ass'y	113 9213 000	113 9213 000	113 9213 000	113 9213 039
52	Top cover	102 0583 001	102 0583 001	102 0583 001	102 0583 014
54	Earth plate	414 0819 005	—	—	—
61	AC outlet (E2)	—	203 3942 007	203 3942 007	203 3942 007
62	UL tube	—	415 0364 016	415 0364 016	415 0364 016
63	Wood board (L)	—	—	—	101 2491 046
64	Wood board (R)	—	—	—	101 2492 045
65	Felt sheet	—	—	—	124 0032 015
121	Screw 4x20 CBTS (S)-B	—	—	—	473 7007 039
	Screw 4x8 CBTS (B)-B	473 8063 014	473 8063 014	473 8063 014	—
122	Screw 4x25 CBTS	—	—	—	473 3809 011
123	5 W (Washer)	—	—	—	475 1006 016
152	Cushion Ass'y	503 1236 000	503 1236 000	503 1236 000	503 1252 000
154	Instruction manual	511 3081 005	511 3115 007	511 3115 007	511 3115 007
157	RC-827 remocon	—	399 0355 011	399 0355 011	399 0355 011
	RC-825 remocon	399 0355 008	—	—	—
166	Side pad	—	—	—	504 0159 013

EXPLODED VIEW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WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.:	RN	14K	2E	182	G	FR
	Type	Shape and performance	Power	Resistance	Allowable error	Others

Type	Power	Allowable error	Others
RD : Carbon RC : Composition RS : Metal oxide film RW : Winding RN : Metal film RK : Metal mixture	2B : 1/8W 2E : 1/4W 2H : 1/2W 3A : 1W 3D : 2W 3F : 3W 3H : 5W	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20%	P : Pulse-resistant type NL : Low noise type NB : Non-burning type FR : Fuse-resistor F : Lead wire forming

✱ Resistance

1 8 2 ⇒ 1800 ohm = 1.8 kohm
Indicates number of zeros after effective number.
2-digit effective number.

- Units: ohm

1 R 2 ⇒ 1.2 ohm
1-digit effective number.
2-digit effective number, decimal point indicated by R.

- Units: ohm

● Capacitors

Ex.:	CE	04W	1H	2R2	M	BP
	Type	Shape and performance	Dielectric strength	Capacity	Allowable error	Others

Type	Dielectric strength	Allowable error	Others
CE : Aluminum foil electrolytic CA : Aluminum solid electrolytic CS : Tantalum electrolytic CQ : Film CK : Ceramic CC : Ceramic CP : Oil CM : Mica CF : Metallized CH : Metallized	0J : 6.3V 1A : 10V 1C : 16V 1E : 25V 1V : 35V 1H : 50V 2A : 100V 2B : 125V 2C : 160V 2D : 200V 2E : 250V 2H : 500V 2J : 630V	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20% Z : +80% −20% P : +100% −0% C : ±0.25pF D : ±0.5pF = : Others	HS : High stability type BP : Non-polar type HR : Ripple-resistant type DL : For change and discharge HF : For assuring high frequency U : UL part C : CSA part W : UL-CSA type F : Lead wire forming

✱ Capacity (electrolyte only)

2 2 2 ⇒ 2200µF
Indicates number of zeros after effective number.
2-digit effective number.

- Units: µF.

2 R 2 ⇒ 2.2µF
1-digit effective number.
2-digit effective number, decimal point indicated by R.

- Units: µF.

✱ Capacity (except electrolyte)

2 2 2 ⇒ 2200pF=0.0022µF
(More than 2)—Indicates number of zeros after effective number.
2-digit effective number.

- Units: µF.

2 2 1 ⇒ 220pF
(0 or 1)——— Indicates number of zeros after effective number.
2-digit effective number.

- Units: pF.

- When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

ADDENDUM PARTS LIST OF P.W.BOARD

1U-2994 MAIN P.W.B. UNIT

Ref No.	U.S.A. Model		Europe Model		Asia Model		Remarks
	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	
C142	257 0008 983	Ceramic chip 1000pF/50V ±10%	—	—	—	—	
C165,166	—	—	257 0003 920	Ceramic chip 27pF/50V ±5%	257 0003 920	Ceramic chip 27pF/50V ±5%	
C167			254 4260 951	Electrolytic 2.2µF/50V	254 4260 951	Electrolytic 2.2µF/50V	
C168	—	—	254 4254 909	Electrolytic 10µF/16V	254 4254 909	Electrolytic 10µF/16V	
C169	—	—	257 0006 943	Ceramic chip 560pF/50V ±5%	257 0006 943	Ceramic chip 560pF/50V ±5%	
C170	—	—	257 0012 966	Ceramic chip 0.01µF/50V +80, −20%	257 0012 966	Ceramic chip 0.01µF/50V +80, −20%	
C171	—	—	254 4254 909	Electrolytic 10µF/16V	254 4254 909	Electrolytic 10µF/16V	
D101	—	—	276 0432 903	Diode 1SS270A	276 0432 903	Diode 1SS270A	
F101~104	206 1039 076	Fuse 2.5A	206 1015 032	Fuse 2.5A	206 1015 032	Fuse 2.5A	
FB110	235 0049 900	Beads inductor		(Jumper)		(Jumper)	
IC111	—	—	262 1701 906	IC SAA6579T	262 1701 906	IC SAA6579T	
IC112	—	—	262 1929 908	IC LC7074M-TE-R	262 1929 908	IC LC7074M-TE-R	
R196	247 0018 905	Carbon chip 0ohm 1/10W ±10%	—	—	—	—	
R197	—	—	247 0009 985	Carbon chip 10kohm 1/10W ±5%	247 0009 985	Carbon chip 10kohm 1/10W ±5%	
X101	—	—	399 0178 007	Crystal 4.332MHz	399 0178 007	Crystal 4.332MHz	
X102	—	—	399 0191 903	Ceramic resonator CST4.00MGW-TF01	399 0191 903 —	Ceramic resonator CST4.00MGW-TF01	
	—	—	513 2585 074	Fuse label	513 2585 074	Fuse label	for F101~104

1U-2995 POWER AMP. P.W.B. UNIT

Ref No.	U.S.A. Model		Europe Model		Asia Model		Remarks
	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	
AC651	203 3976 002	AC outlet (2P)	—	—	—	—	
CX025			205 0581 001	2P VH connector base	205 0581 001	2P VH connector base	
F001	206 1046 014	Fuse 8A	206 1015 087	Fuse 4A	206 1015 087	Fuse 4A	
F008	206 1046 014	Fuse 8A	206 1015 032	Fuse 2.5A	206 1015 032	Fuse 2.5A	
R654	242 0073 000	Composition 2.2M ohm 1/2W ±10%	—	—	—	—	
T651	233 5818 004	Power trans. (Mini)-EU	233 6074 009	Power trans. (Mini) -ES	233 6074 009	Power trans. (Mini) -ES	
	—	—	415 0299 000	Condenser cover	415 0299 000	Condenser cover	for C660
	—	—	513 2585 074	Fuse label	513 2585 074	Fuse label	for F008
	—	—	513 2585 058	Fuse label	513 2585 058	Fuse label	for F001

1U-2996 VIDEO & DISPLAY P.W.B. UNIT

Ref No.	U.S.A. Model		Europe Model		Asia Model		Remarks
	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	
F401	206 1039 076	Fuse 2.5A	206 1015 032	Fuse 2.5A	206 1015 032	Fuse 2.5A	
	—	—	513 2585 074	Fuse label	513 2585 074	Fuse label	for F401

1U-2997 TUNER P.W.B. UNIT

Ref No.	U.S.A. Model		Europe Model		Asia Model		Remarks
	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	
C519	—	—	257 0004 961	Ceramic chip 100pF/50V ±5%	257 0004 961	Ceramic chip 100pF/50V ±5%	
C527	254 4260 948	Electrolytic 1μF/50V	254 4260 922	Electrolytic 0.33μF/50V	254 4260 922	Electrolytic 0.33μF/50V	
C536	257 0004 961	Ceramic chip 100pF/50V ±5%	—	—	—	—	
C537	—	—	254 4254 912	Electrolytic 22μF/16V	254 4254 912	Electrolytic 22μF/16V	
C539,540	257 0006 972	Ceramic chip 750pF/50V ±5%	257 0006 930	Ceramic chip 510pF/50V ±5%	257 0006 930	Ceramic chip 510pF/50V ±5%	
C568	257 0010 900	Ceramic chip 0.01μF/50V ±10%	257 0008 983	Ceramic chip 1000pF/50V ±10%	—	—	
C564,565	—	—	—	—	257 0005 986	Ceramic chip 330pF/50V ±5%	
C591	257 0008 983	Ceramic chip 1000pF/50V ±5%	—	—	—	—	
CF501,502	—	—	261 0146 006	FMCFSK107M2-A	261 0146 006	FMCFSK107M2-A	
IC501	216 0102 008	Front end	216 9013 004	FM front end (U) S	216 9013 004	FM front end (U) S	
JK601	204 8264 013	Headphone jack (NI)	204 8264 013	Headphone jack (NI)	204 8264 071	Headphone jack (gold)	
LF501	—	—	232 9010 009	Antibirdie filter	232 9010 009	Antibirdie filter	
LF503,504	—	—	232 0085 004	LPF	232 0085 004	LPF	
R502	—	—	247 0018 905	Carbon chip 0ohm 1/10W ±10%	247 0018 905	Carbon chip 0ohm 1/10W ±10%	
R514	247 0018 905	Carbon chip 0ohm 1/10W ±10%	247 0005 905	Carbon chip 100ohm 1/10W ±5%	247 0005 905	Carbon chip 100ohm 1/10W ±5%	
R515	247 0005 905	Carbon chip 100ohm 1/10W ±5%	—	—	—	—	
R516	247 0007 945	Carbon chip 1kohm 1/10W ±5%	247 0006 920	Carbon chip 330ohm 1/10W ±5%	247 0006 920	Carbon chip 330ohm 1/10W ±5%	
R517	—	—	247 0006 920	Carbon chip 330ohm 1/10W ±5%	247 0006 920	Carbon chip 330ohm 1/10W ±5%	
R535	247 0010 945	Carbon chip 18kohm 1/10W ±5%	247 0011 928	Carbon chip 39kohm 1/10W ±5%	247 0011 928	Carbon chip 39kohm 1/10W ±5%	
R536	247 0018 905	Carbon chip 0ohm 1/10W ±10%	247 0008 944	Carbon chip 2.7kohm 1/10W ±5%	247 0008 944	Carbon chip 2.7kohm 1/10W ±5%	
R563,564	247 0010 916	Carbon chip 13kohm 1/10W ±5%	247 0010 929	Carbon chip 15kohm 1/10W ±5%	247 0010 929	Carbon chip 15kohm 1/10W ±5%	
R579,580	247 0018 905	Carbon chip 0ohm 1/10W ±10%	—	—	—	—	
R581	247 0018 905	Carbon chip 0ohm 1/10W ±10%	—	—	—	—	
R592,593	247 0018 905	Carbon chip 0ohm 1/10W ±10%	247 0005 905	Carbon chip 100ohm 1/10W ±5%	247 0018 905	Carbon chip 0ohm 1/10W ±10%	
R597,598	247 0018 905	Carbon chip 0ohm 1/10W ±10%	247 0006 962	Carbon chip 470ohm 1/10W ±5%	247 0018 905	Carbon chip 0ohm 1/10W ±10%	
R645	—	—	247 0009 985	Carbon chip 10kohm 1/10W ±5%	247 0009 985	Carbon chip 10kohm 1/10W ±5%	
R646	—	—	247 0009 927	Carbon chip 5.6kohm 1/10W ±5%	247 0009 927	Carbon chip 5.6kohm 1/10W ±5%	
TR501	—	—	275 0074 902	FET 2SK211-Y/GR	275 0074 902	FET 2SK211-Y/GR	
C592	—	—	253 1180 921	Ceramic cap.1000pF/50V ±10%	253 1180 921	Ceramic cap.1000pF/50V ±10%	

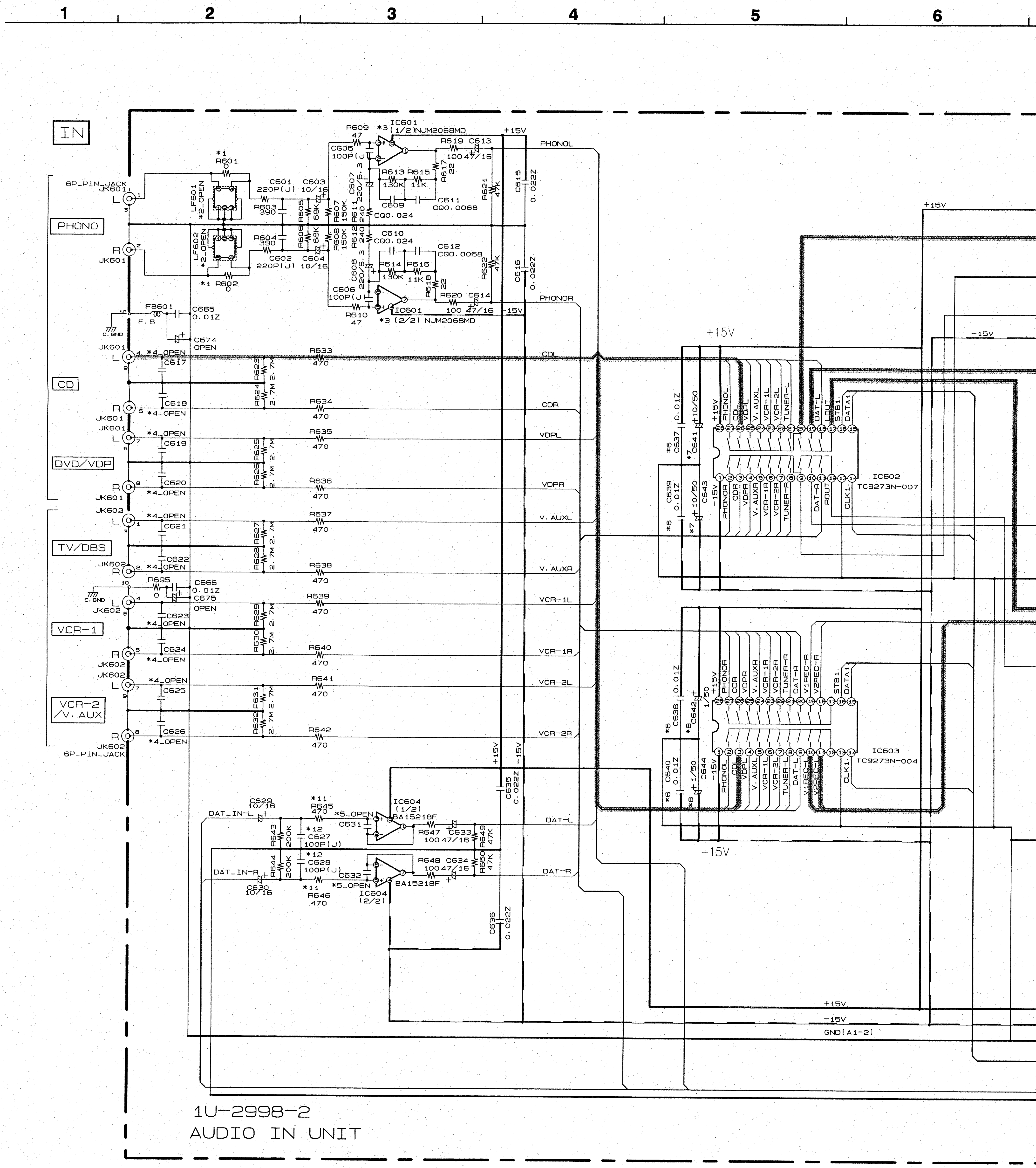
1U-2998 AUDIO & DSP P.W.B. UNIT

Ref No.	U.S.A. Model		Europe Model		Asia Model		Remarks
	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	
C303	257 0004 961	Ceramic chip 100pF/50V ±5%	—	—	257 0004 961	Ceramic chip 100pF/50V ±5%	
C311	257 0004 961	Ceramic chip 100pF/50V ±5%	—	—	257 0004 961	Ceramic chip 100pF/50V ±5%	
C447	—	—	257 0008 983	Ceramic chip 1000pF/50V ±10%	257 0008 983	Ceramic chip 1000pF/50V ±10%	
C617~626	—	—	257 0005 986	Ceramic chip 330pF/50V ±5%	257 0005 986	Ceramic chip 330pF/50V ±5%	
C627,628	257 0004 961	Ceramic chip 100pF/50V ±5%	257 0006 927	Ceramic chip 470pF/50V ±5%	257 0004 961	Ceramic chip 100pF/50V ±5%	
C631,632	—	—	—	—	257 0004 961	Ceramic chip 100pF/50V ±5%	
C649,650	—	—	257 0004 961	Ceramic chip 100pF/50V ±5%			
C701,702	—	—	257 0005 986	Ceramic chip 330pF/50V ±5%	257 0005 986	Ceramic chip 330pF/50V ±5%	
C707,708	—	—	257 0004 961	Ceramic chip 100pF/50V ±5%	257 0004 961	Ceramic chip 100pF/50V ±5%	
C715,716	—	—	257 0005 986	Ceramic chip 330pF/50V ±5%	257 0005 986	Ceramic chip 330pF/50V ±5%	
C721,722	—	—	257 0004 961	Ceramic chip 100pF/50V ±5%	257 0004 961	Ceramic chip 100pF/50V ±5%	
C729,730	—	—	257 0005 986	Ceramic chip 330pF/50V ±5%	257 0005 986	Ceramic chip 330pF/50V ±5%	
C735,736	—	—	257 0004 961	Ceramic chip 100pF/50V ±5%	257 0004 961	Ceramic chip 100pF/50V ±5%	
FB301	235 0106 908	Chip emifil (21A05)	247 0018 905	Carbon chip 0ohm 1/10W ±10%	235 0106 908	Chip emifil (21A05)	
LF601,602	—	—	235 9003 002	FTZ choke coil	235 9003 002	FTZ choke coil	
R601,602	247 0018 905	Carbon chip 0ohm 1/10W ±10%	247 0007 974	Carbon chip 1.3kohm 1/10W±5%	247 0007 974	Carbon chip 1.3kohm 1/10W±5%	
R645,646	247 0006 962	Carbon chip 470ohm 1/10W ±5%	247 0005 905	Carbon chip 100ohm 1/10W ±5%	247 0006 962	Carbon chip 470ohm 1/10W ±5%	
R705,706	247 0006 962	Carbon chip 470ohm 1/10W ±5%	247 0005 905	Carbon chip 100ohm 1/10W ±5%	247 0005 905	Carbon chip 100ohm 1/10W ±5%	
R721,722	247 0006 962	Carbon chip 470ohm 1/10W ±5%	247 0005 905	Carbon chip 100ohm 1/10W ±5%	247 0005 905	Carbon chip 100ohm 1/10W ±5%	
R737,738	247 0006 962	Carbon chip 470ohm 1/10W ±5%	247 0005 905	Carbon chip 100ohm 1/10W ±5%	247 0005 905	Carbon chip 100ohm 1/10W ±5%	
R747~750	247 0018 905	Carbon chip 0ohm 1/10W ±10%	247 0006 962	Carbon chip 470ohm 1/10W ±5%	247 0006 962	Carbon chip 470ohm 1/10W ±5%	
R751,752	247 0018 905	Carbon chip 0ohm 1/10W ±10%	247 0006 962	Carbon chip 470ohm 1/10W ±5%	247 0006 962	Carbon chip 470ohm 1/10W ±5%	

1U-3006 E. VOL. P.W.B. UNIT

Ref No.	U.S.A. Model		Europe Model		Asia Model		Remarks
	Part No.	Part Name	Part No.	Part Name	Part No.	Part Name	
C191	—	—	257 0004 961	Ceramic chip 100pF/50V ±5%	257 0004 961	Ceramic chip 100pF/50V ±5%	
C195,196	—	—	257 0004 961	Ceramic chip 100pF/50V ±5%	257 0004 961	Ceramic chip 100pF/50V ±5%	
C199	—	—	253 1180 921	Ceramic 1000pF/50V ±10%	253 1180 921	Ceramic 1000pF/50V ±10%	(CX961③~⑤)
—	—	—	203 0318 045	Earth wire (UL1430)	203 0318 045	Earth wire (UL1430)	(JV80)

SCHEMATIC DIAGRAM (1/5)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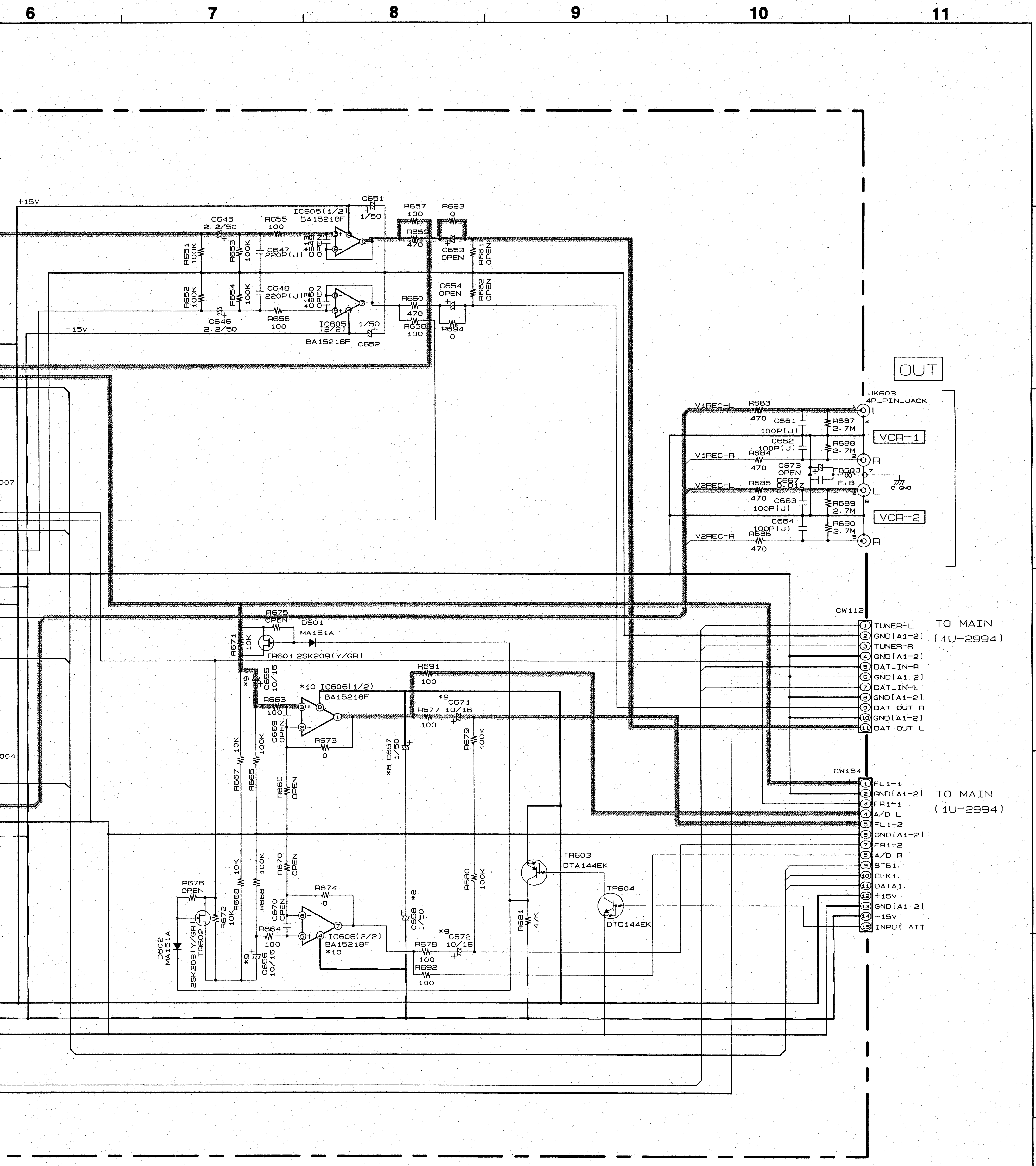
IN
PHONO
CD
DVD/VDP
TV/DBS
VCR-1
VCR-2 /V. AUX
6P_PIN_JACK JK601
6P_PIN_JACK JK602
IC601 *3 (1/2) NJM2068MD
*3 (2/2) NJM2068MD
IC602 TC9273N-007
IC603 TC9273N-004
IC604 (1/2) BA15218F
IC604 (2/2) BA15218F
PHONOL
PHONOR
CDL
CDR
VDPL
VDPR
V. AUXL
V. AUXR
VCR-1L
VCR-1R
VCR-2L
VCR-2R
DAT-L
DAT-R
DAT_IN-L
DAT_IN-R
+15V
-15V
GND[A1-2]
1U-2998-2
AUDIO IN UNIT

	*1 R601, 602	*2 LF601, 602	*3 IC601	*4 C617 ～ 626	*5 C631, 632	*6 C637 ～ 640	*7 C641, 643	*8 C642, 644 C657, 658	*9 C655, 656 C671, 672	*10 IC606	*11 R645, 646	*12 C627, 628	*13 C649
* USA CANADA TAIWAN R.O.C	0	——	NJM2068MD	——	——	0.01Z	10/50	1/50	10/16	BA15218	470	100P	——
ASIA	1.3K	L.P.F	NJM2068MD	330P	100P	0.01Z	10/50	1/50	10/16	BA15218	470	100P	——
EUROPE	1.3K	L.P.F	NJM2068MD	330P	——	0.01Z	10/50	1/50	10/16	BA15218	100	470P	10
JAPAN	0	——	NJM2068MD	——	——	——	10/50(ASF)	1/50(ASF)	10/50(ASF)	NJM5532MD	470	100P	——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B
C
D
E
F
+15V
-15V
C645 2.2/50
C646 2.2/50
R655 100
R656 100
R651 100K
R652 100K
R653 100K
R654 100K
C647 220P(J)
C648 220P(J)
*13 C649 OPEN
*13 C650 OPEN
IC605(1/2) BA15218F
IC605(2/2) BA15218F
C651 1/50
C652 1/50
R657 100
R658 100
R659 470
R660 470
R693 0
R694 0
C653 OPEN
C654 OPEN
R661 OPEN
R662 OPEN
OUT
JK603 4P_PIN_JACK
V1REC-L
V1REC-R
V2REC-L
V2REC-R
R683 470
R684 470
R685 470
R686 470
C661 100P(J)
C662 100P(J)
C663 100P(J)
C664 100P(J)
C673 OPEN
C667 0.01Z
R687 2.7M
R688 2.7M
R689 2.7M
R690 2.7M
FB603 F.B
C.GND
VCR-1
VCR-2
L
R
CW112
TUNER-L
GND(A1-2)
TUNER-R
DAT_IN-R
DAT_IN-L
DAT OUT R
DAT OUT L
TO MAIN (1U-2994)
CW154
FL1-1
FR1-1
A/D L
FL1-2
FR1-2
A/D R
STB1.
CLK1.
DATA1.
+15V
-15V
INPUT ATT
R675 OPEN
D601 MA151A
R671 10K
TR601 2SK209(Y/GR)
*9 C655 10/16
*10 IC606(1/2) BA15218F
R663 100
C669 OPEN
R673 0
R691 100
*9 C671 10/16
R677 100
*8 C657 1/50
R679 100K
R667 10K
R665 100K
R669 OPEN
R668 10K
R666 100K
R670 OPEN
R676 OPEN
D602 MA151A
2SK209(Y/GR) TR602
R672 10K
C670 OPEN
R674 0
R664 100
*9 C656 10/16
IC606(2/2) BA15218F *10
*8 C658 1/50
*9 C672 10/16
R678 100
R692 100
R680 100K
R681 47K
TR603 DTA144EK
TR604 DTC144EK
007
004

5, 646	*12 C627, 628	*13 C649, 650
470	100P	—
470	100P	—
100	470P	100P
470	100P	—

+B LINE

-B LINE

SIGNAL LINE

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

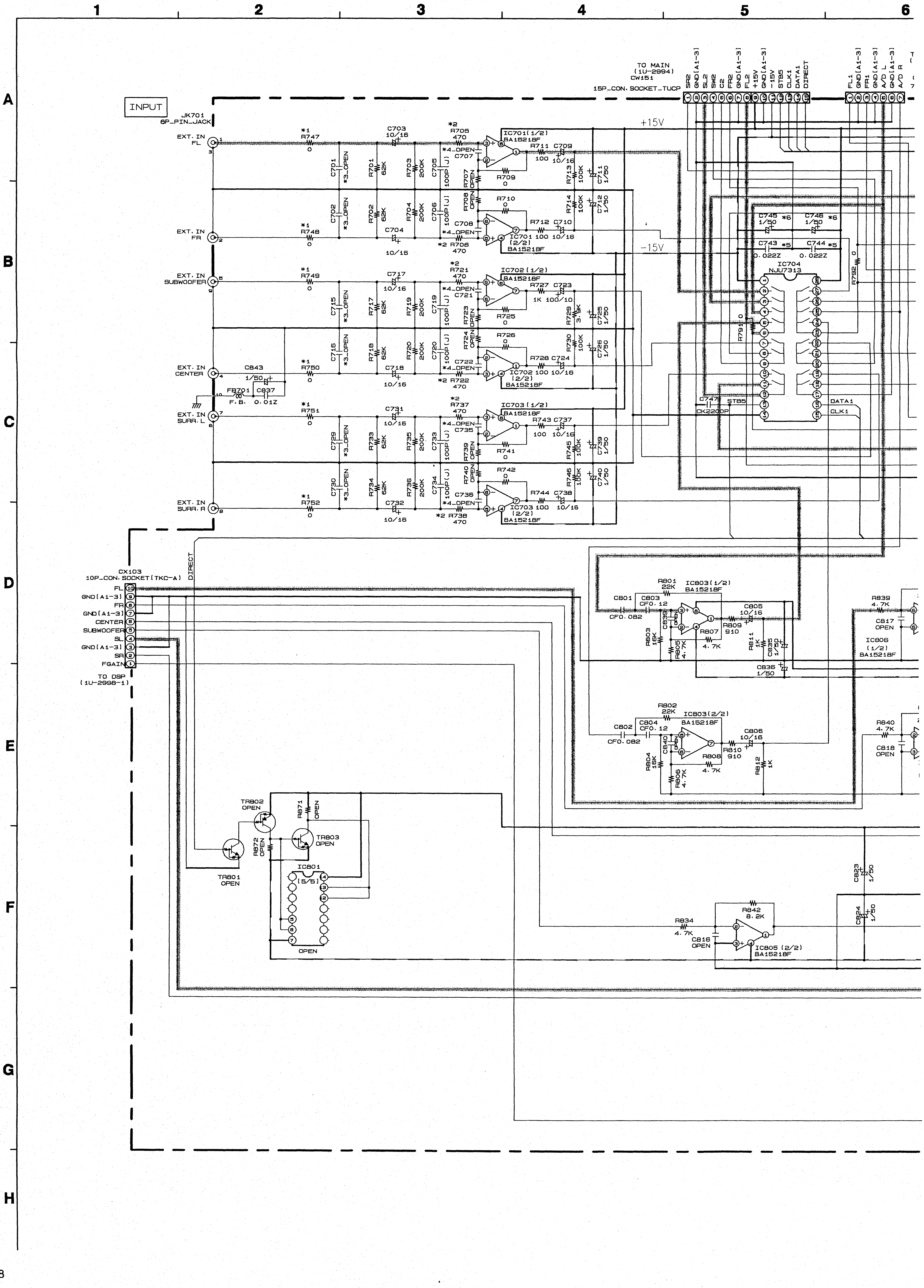
CAUTION:

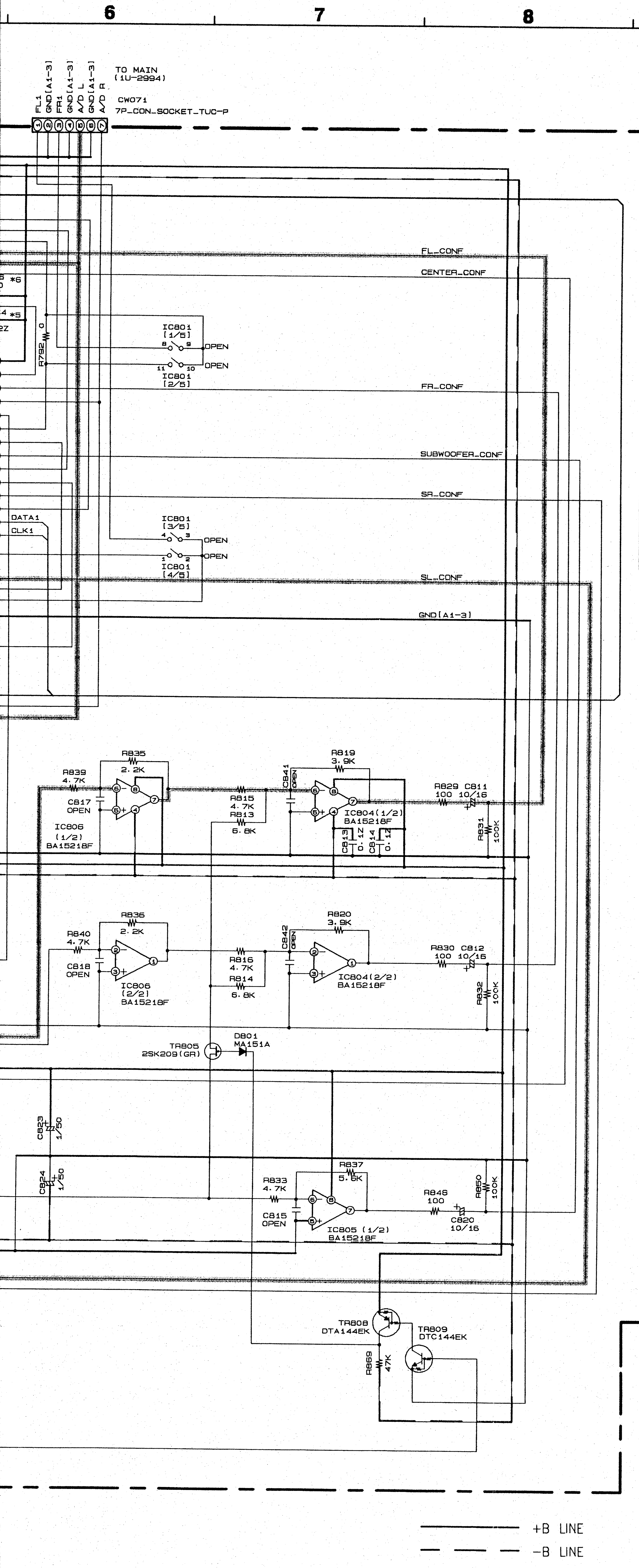
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer unit the problem is located and corrected.

SCHEMATIC DIAGRAM (2/5)


1
2
3
4
5
6
A
B
C
D
E
F
G
H
INPUT
JK701
6P_PIN_JACK
EXT. IN FL
EXT. IN FR
EXT. IN SUBWOOFER
EXT. IN CENTER
EXT. IN SURR. L
EXT. IN SURR. R
FB701 F.B.
C843 1/50
C837 0.01Z
R747 0
R748 0
R749 0
R750 0
R751 0
R752 0
C703 10/16
C704 10/16
C717 10/16
C718 10/16
C731 10/16
C732 10/16
C701 *3_OPEN
C702 *3_OPEN
C715 *3_OPEN
C716 *3_OPEN
C729 *3_OPEN
C730 *3_OPEN
R701 62K
R702 62K
R717 62K
R718 62K
R733 62K
R734 62K
R703 200K
R704 200K
R719 200K
R720 200K
R735 200K
R736 200K
C705 100P(J)
C706 100P(J)
C719 100P(J)
C720 100P(J)
C733 100P(J)
C734 100P(J)
R705 470
R706 470
R721 470
R722 470
R737 470
R738 470
*4_OPEN
IC701(1/2) BA15218F
IC701 (2/2) BA15218F
IC702(1/2) BA15218F
IC702 (2/2) BA15218F
IC703(1/2) BA15218F
IC703 (2/2) BA15218F
R711 100
R712 100
R727 1K
R728 100
R743 100
R744 100
C709 10/16
C710 10/16
C723 100/10
C724 10/16
C737 10/16
C738 10/16
R713 100K
R714 100K
R729 3.3K
R730 100K
R745 100K
R746 100K
C711 1/50
C712 1/50
C725 1/50
C726 1/50
C739 1/50
C740 1/50
R709 0
R710 0
R725 0
R726 0
R741 0
R742 0
+15V
-15V
TO MAIN (1U-2994)
CW151
15P_CON. SOCKET_TUCP
SR2
GND(A1-3)
SL2
SW2
C2
FR2
FL2
+15V
-15V
STB5
CLK1
DATA1
DIRECT
FL1
FR1
A/D L
A/D R
C745 1/50 *6
C746 1/50 *6
C743 0.022Z *5
C744 0.022Z *5
IC704 NJU7313
R792 0
R791 0
C747 CK2200P
STB5
DATA1
CLK1
CX103
10P_CON. SOCKET(TKC-A)
FL
GND(A1-3)
FR
CENTER
SUBWOOFER
SL
SR
FGAIN
TO DSP (1U-2998-1)
DIRECT
R801 22K
IC803(1/2) BA15218F
C801 CF0.082
C803 CF0.12
C839 OPEN
R803 16K
R805 4.7K
R807 4.7K
R809 910
C805 10/16
R811 1K
C835 1/50
C836 1/50
R802 22K
IC803(2/2) BA15218F
C802 CF0.082
C804 CF0.12
C840 OPEN
R804 16K
R806 4.7K
R808 4.7K
R810 910
C806 10/16
R812 1K
R839 4.7K
C817 OPEN
IC806 (1/2) BA15218F
R840 4.7K
C818 OPEN
TR802 OPEN
TR801 OPEN
TR803 OPEN
R871 OPEN
R872 OPEN
IC801 (5/5)
OPEN
R834 4.7K
C816 OPEN
R842 8.2K
IC805 (2/2) BA15218F
C823 1/50
C824 1/50


6
7
8
9
10
11
TO MAIN
(1U-2994)
FL1
GND(A1-3)
FR1
GND(A1-3)
A/D L
GND(A1-3)
A/D R
CW071
7P_CON_SOCKET_TUC-P
*6
*5
R792
0
IC801
[1/5]
OPEN
IC801
[2/5]
FL_CONF
CENTER_CONF
FR_CONF
SUBWOOFER_CONF
SR_CONF
DATA1
CLK1
IC801
[3/5]
IC801
[4/5]
SL_CONF
GND(A1-3)
R835
2.2K
R839
4.7K
C817
OPEN
IC806
(1/2)
BA15218F
R815
4.7K
R813
6.8K
C841
OPEN
R819
3.9K
IC804(1/2)
BA15218F
C813
0.1Z
C814
0.1Z
R829
100
C811
10/16
R831
100K
R836
2.2K
R840
4.7K
C818
OPEN
IC806
(2/2)
BA15218F
R816
4.7K
R814
6.8K
C842
OPEN
R820
3.9K
IC804(2/2)
BA15218F
R830
100
C812
10/16
R832
100K
TR805
2SK209(GR)
D801
MA151A
C823
1/50
C824
1/50
R833
4.7K
C815
OPEN
R837
5.6K
IC805 (1/2)
BA15218F
R846
100
C820
10/16
R850
100K
TR808
DTA144EK
TR809
DTC144EK
R869
47K
+B LINE
-B LINE
SIGNAL LINE

	*1 R747, 748 R749, 750 R751, 752	*2 R705, 706 R721, 722 R737, 738	*3 C701, 702 C715, 716 C729, 730	*4 C707, 708 C721, 722 C735, 736
* USA CANADA TAIWAN R.O.C	0	470	——	——
ASIA	470	100	330P	100P
EUROPE	470	100	330P	100P
JAPAN	0	470	——	——

	*5 C743, 744	*6 C745, 746
* USA CANADA TAIWAN R.O.C	0.022Z	1/50
ASIA	0.022Z	1/50
EUROPE	0.022Z	1/50
JAPAN	——	1/50(ASF)

1U-2998-3

6CH. EXTERNAL_IN_UNIT

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

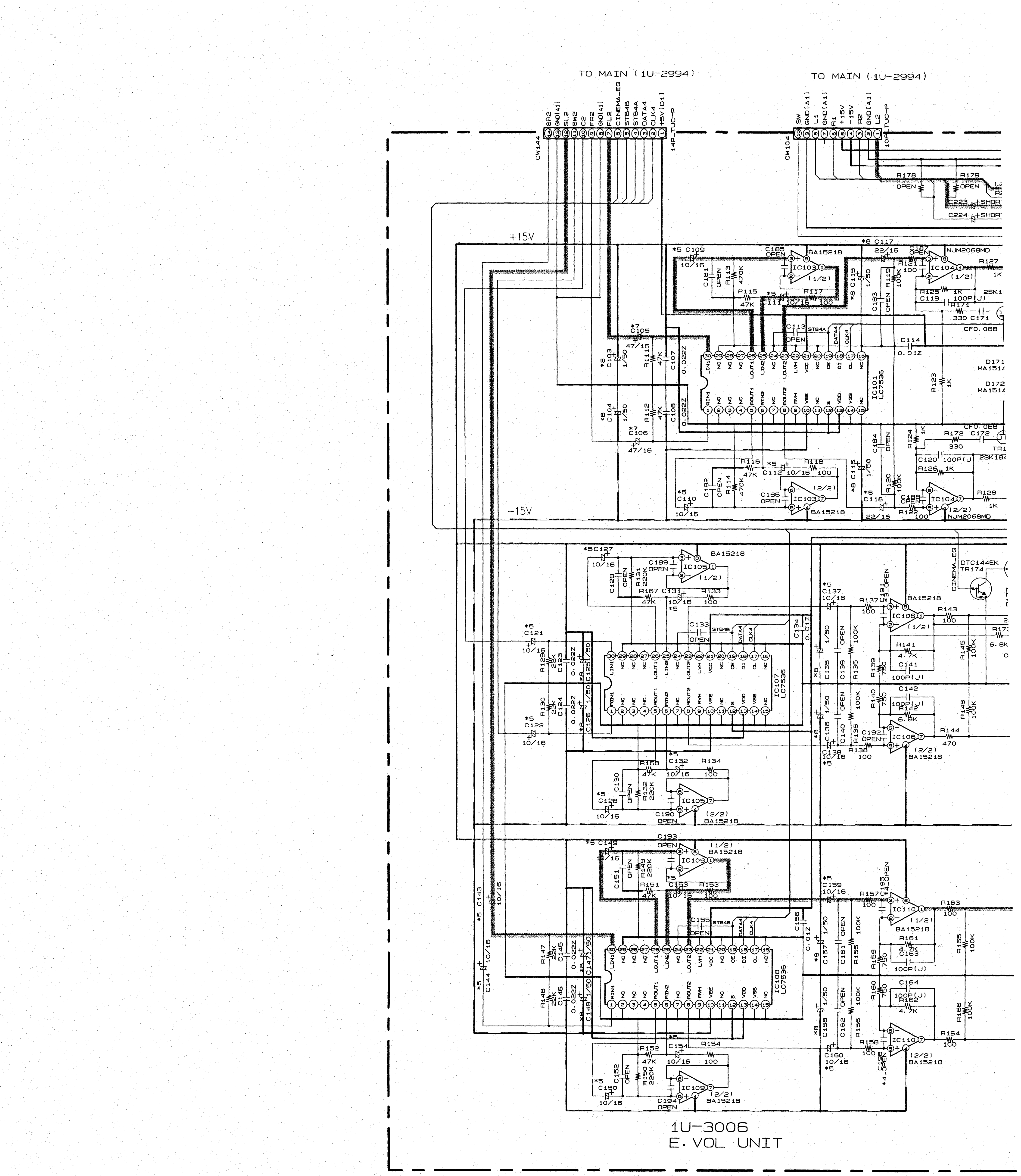
CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is detective.

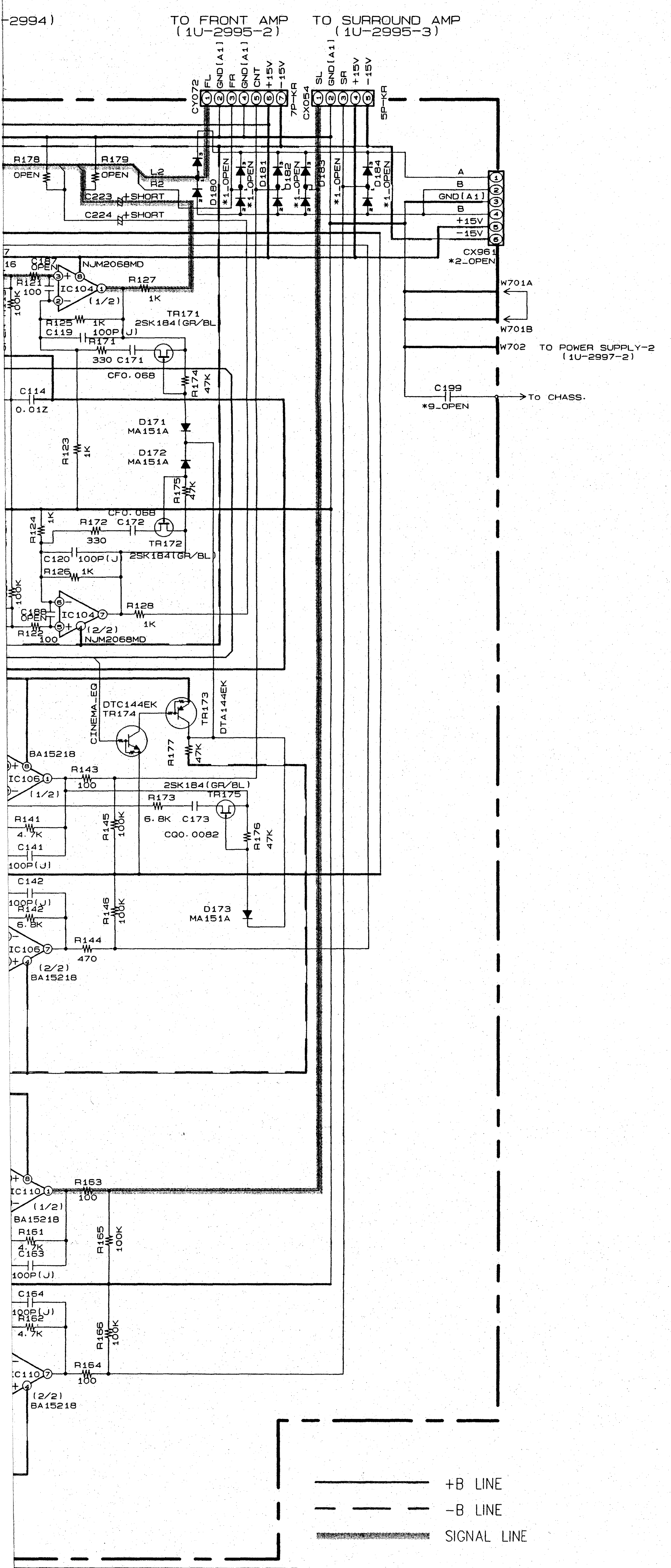
WARNING:

DO NOT return the unit to the customer unit the problem is located and corrected.

SCHEMATIC DIAGRAM (3/5)


1
2
3
4
5
6
TO MAIN (1U-2994)
TO MAIN (1U-2994)
CW144
14P_TUC-P
SR2
GND(A1)
SL2
SW2
C2
FR2
GND(A1)
FL2
CINEMA_EQ
STB4B
STB4A
DATA4
CLK4
+5V(D1)
CW104
10P_TUC-P
SW
GND(A1)
L1
GND(A1)
R1
+15V
-15V
R2
GND(A1)
L2
+15V
-15V
IC101 LC7536
IC107 LC7536
IC108 LC7536
IC103 BA15218
IC105 BA15218
IC109 BA15218
IC104 NJM2068MD
IC106 BA15218
IC110 BA15218
DTC144EK TR174
CINEMA_EQ
D171 MA151A
D172 MA151A
CF0.068
2SK1...
1U-3006
E. VOL UNIT

	*1 D180 ～ 185	*2 CX961	*3 C191	*4 C195, 196	*5 C109 ～ C112 , 121, 122, 127, 128 C131, 132, 137, 138, 143, 144, 149, 150 C153, 154, 159, 160	*6 C117, 118	*7 C105, 106	*8 C103, 104, 115, 116 C135, 136, 147, 148
* USA / CANADA TAIWAN R.O.C	---	---	---	---	10/16	22/16	47/16	1/50
ASIA / EUROPE	---	---	100P	100P	10/16	22/16	47/16	1/50
JAPAN	MA157A-TX	6P KR	---	---	10/50(ASF)	22/50(ASF)	47/50(ASF)	1/50(ASF


-2994)
TO FRONT AMP
(1U-2995-2)
TO SURROUND AMP
(1U-2995-3)
CY072
FL
GND(A1)
FR
GND(A1)
CNT
+15V
-15V
7P-KR
CX054
SL
GND(A1)
SR
+15V
-15V
5P-KR
R178
OPEN
R179
OPEN
L2
R2
C223 +SHORT
C224 +SHORT
D180
*1_OPEN
*1_OPEN
D181
D182
*1_OPEN
D183
*1_OPEN
D184
*1_OPEN
A
B
GND(A1)
B
+15V
-15V
CX961
*2_OPEN
W701A
W701B
W702
TO POWER SUPPLY-2
(1U-2997-2)
C199
*9_OPEN
To CHASS.
C187
OPEN
NJM2068MD
R121
100
IC104
(1/2)
R127
1K
TR171
2SK184(GR/BL)
R125 1K
C119 100P(J)
R171
330 C171
CF0.068
R174
47K
C114
0.01Z
D171
MA151A
D172
MA151A
R123
1K
R175
47K
CF0.068
R124
1K
R172 C172
330
TR172
2SK184(GR/BL)
C120 100P(J)
R126 1K
C188
OPEN
IC104
(2/2)
NJM2068MD
R128
1K
R122
100
CINEMA_EQ
DTC144EK
TR174
TR173
DTA144EK
R177
47K
BA15218
R143
100
IC106
(1/2)
2SK184(GR/BL)
TR175
R173
6.8K C173
CQ0.0082
R176
47K
R141
4.7K
C141
100P(J)
R145
100K
C142
100P(J)
R142
6.8K
R146
100K
D173
MA151A
R144
470
IC106
(2/2)
BA15218
R163
100
IC110
(1/2)
BA15218
R161
4.7K
C163
100P(J)
R165
100K
C164
100P(J)
R162
4.7K
R166
100K
R164
100
IC110
(2/2)
BA15218
+B LINE
-B LINE
SIGNAL LINE
6
7
8
9
10
11
A
B
C
D
E
F
G
H

7 105·106	*8 C103·104·115·116·125·126 C135·136·147·148·157·158	*9 C199
47/16	1/50	---
47/16	1/50	1000P
/50(ASF)	1/50(ASF)	---

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

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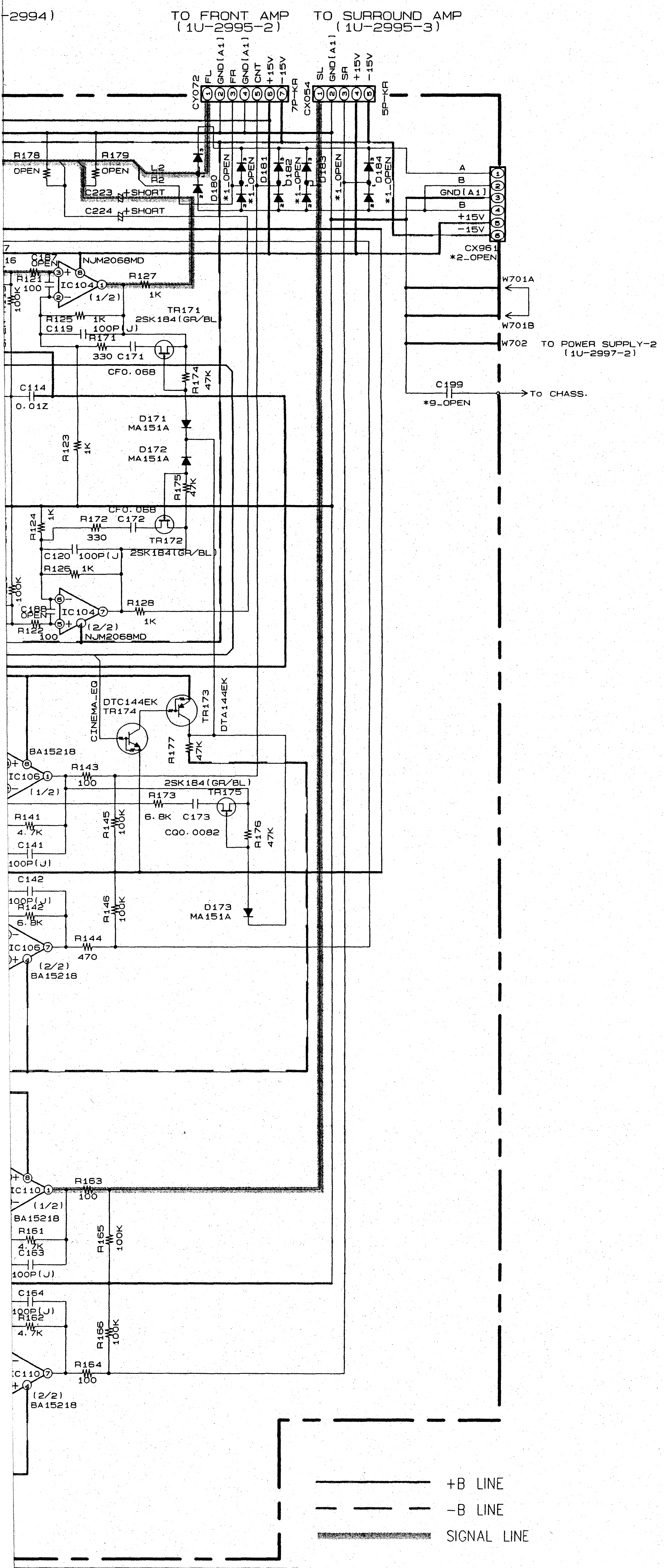
CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is detective.

WARNING:

DO NOT return the unit to the customer unit the problem is located and corrected.


-2994)
TO FRONT AMP
(1U-2995-2)
TO SURROUND AMP
(1U-2995-3)
CY072
FL
GND(A1)
FR
GND(A1)
CNT
+15V
-15V
7P-KR
CX054
SL
GND(A1)
SR
+15V
-15V
5P-KR
R178
OPEN
R179
OPEN
L2
R2
C223 +SHORT
C224 +SHORT
D180
*1_OPEN
D181
D182
D183
D184
A
B
GND(A1)
B
+15V
-15V
CX961
*2_OPEN
W701A
W701B
W702 TO POWER SUPPLY-2
(1U-2997-2)
C199
*9_OPEN
TO CHASS.
C187
OPEN
NJM2068MD
R121
100
IC104
(1/2)
R127
1K
TR171
2SK184(GR/BL)
R125 1K
C119 100P(J)
R171
330 C171
CF0.068
R174
47K
C114
0.01Z
D171
MA151A
D172
MA151A
R123
1K
R175
47K
R124
1K
R172 C172
330
CF0.068
TR172
2SK184(GR/BL)
C120 100P(J)
R126 1K
C188
OPEN
IC104
R128
1K
R122
100
(2/2)
NJM2068MD
CINEMA_EQ
DTC144EK
TR174
TR173
DTA144EK
R177
47K
BA15218
IC106
(1/2)
R143
100
2SK184(GR/BL)
TR175
R173
6.8K C173
CQ0.0082
R141
4.7K
C141
100P(J)
R145
100K
R176
47K
C142
100P(J)
R142
6.8K
R146
100K
D173
MA151A
IC106
R144
470
(2/2)
BA15218
IC110
(1/2)
BA15218
R163
100
R161
4.7K
C163
100P(J)
R165
100K
C164
100P(J)
R162
4.7K
R166
100K
IC110
R164
100
(2/2)
BA15218

7 105, 106	*8 C103, 104, 115, 116, 125, 126 C135, 136, 147, 148, 157, 158	*9 C199
47/16	1/50	---
47/16	1/50	1000P
/50(ASF)	1/50(ASF)	---

+B LINE

-B LINE

SIGNAL LINE

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

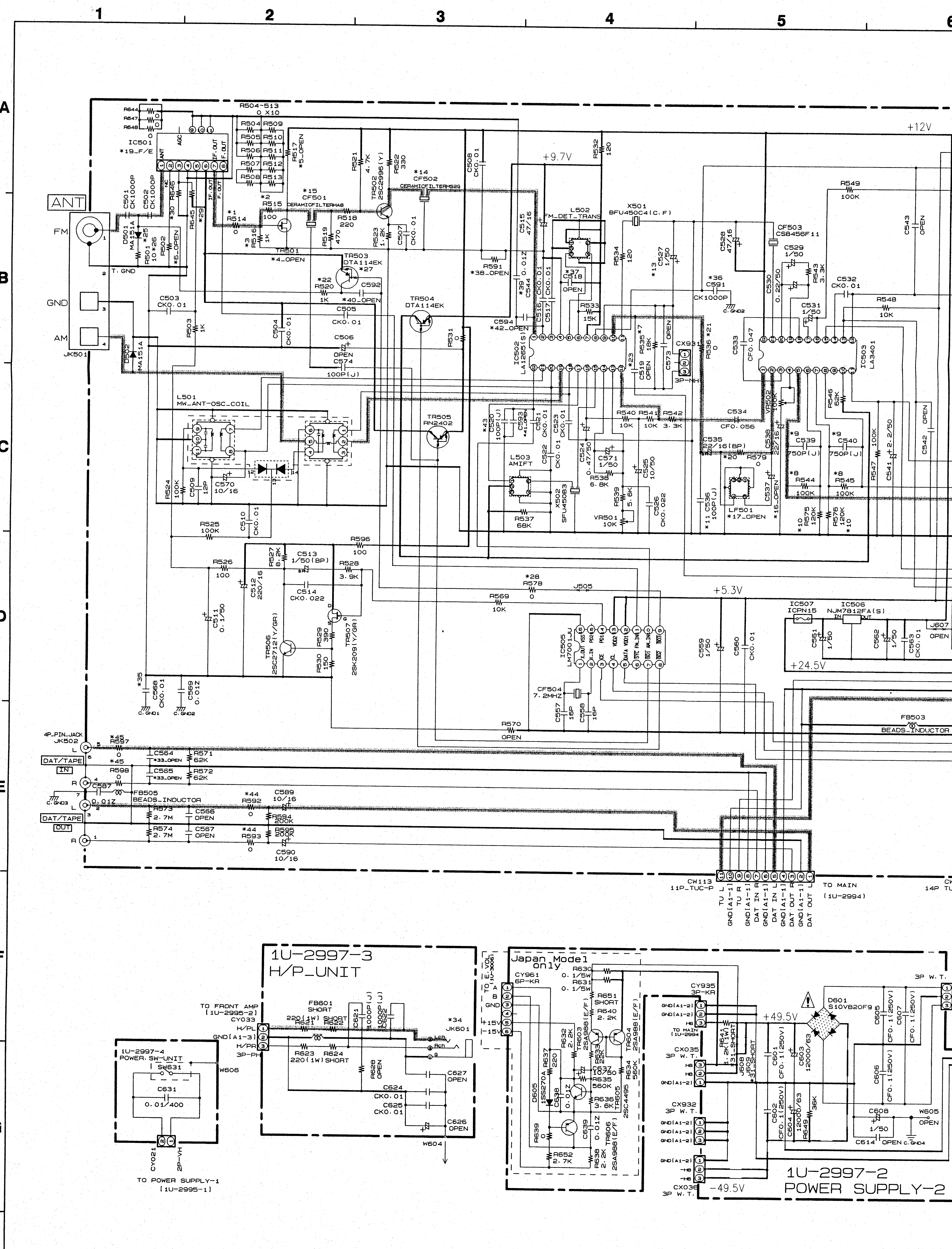
CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is detective.

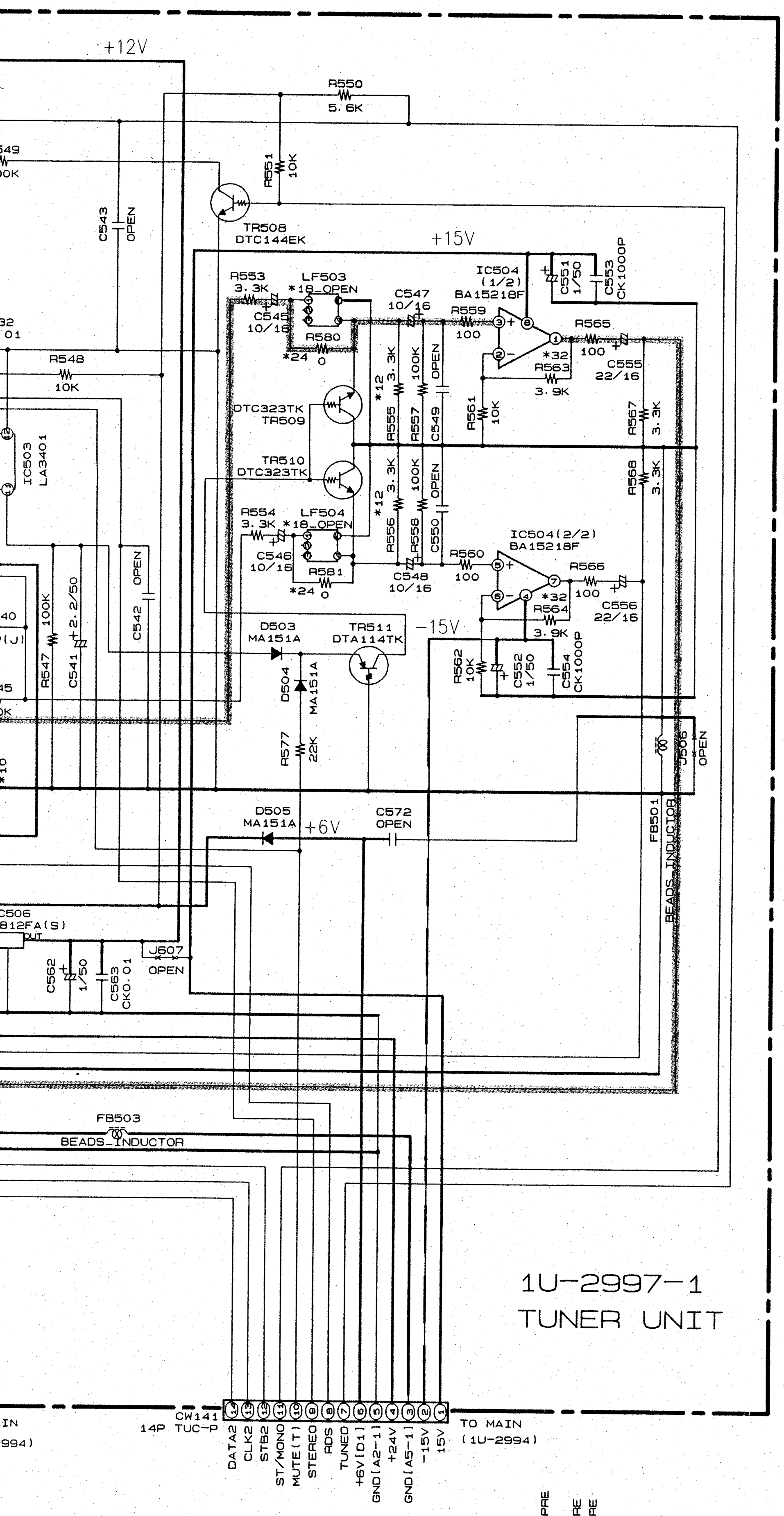
WARNING:

DO NOT return the unit to the customer unit the problem is located and corrected.

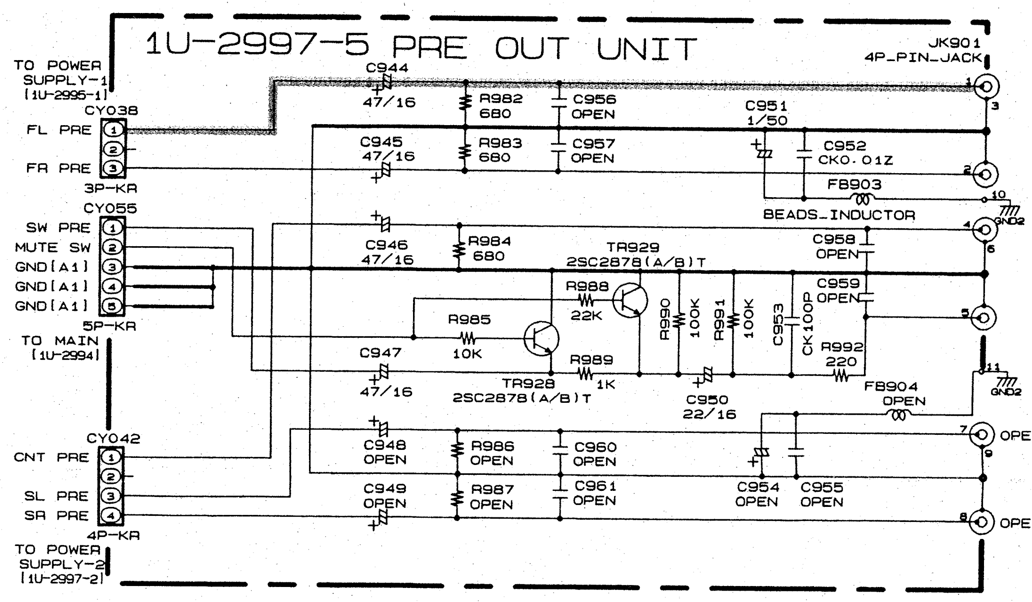
SCHEMATIC DIAGRAM (4/5)


1
2
3
4
5
A
B
C
D
E
F
G
H
ANT
FM
GND
AM
JK501
T. GND
IC501
*19_F/E
AGC
IF. OUT
F. OUT
R644
R647
R648
R504-513
0 X10
R504 R509
R505 R510
R506 R511
R507 R512
R508 R513
R517
*5_OPEN
R521
4.7K
TR502
2SC2996(Y)
R522
330
*14
CF502
CERAMICFILTERMS2G
*15
CF501
CERAMICFILTERMA8
R515
100
R514
R518
220
R519
470
R523
1.2K
C507
CK0.01
C508
CK0.01
+9.7V
R532
120
+12V
C501
CK1000P
C502
CK1000P
D501
MA151A
R501
R502
*6_OPEN
R645
R646
TR501
*4_OPEN
TR503
DTA114EK
*27
R520
1K
C592
*40_OPEN
R591
*38_OPEN
C515
47/16
L502
FM_DET_TRANS
X501
BFU450C4(C.F)
R534
120
C527
1/50
C528
47/16
CF503
CSB456F11
C529
1/50
R543
3.3K
R549
100K
C543
OPEN
C503
CK0.01
R503
1K
C504
CK0.01
C505
CK0.01
C506
OPEN
C574
100P(J)
TR504
DTA114EK
R531
C594
*42_OPEN
C544
C516
CK0.01
C517
C518
OPEN
R533
15K
R535 *7
18K
C573
OPEN
CX931
3P-NH
R536 *21
0
C591
CK1000P
C.GND2
C530
0.22/50
C533
CF0.047
C531
1/50
C532
CK0.01
R548
10K
IC502
LA1265(S)
IC503
LA3401
D502
MA151A
L501
MW_ANT-OSC_COIL
TR505
RN2402
C520
100P(J)
*43
C593
*41_OPEN
C521
CK0.01
C523
CK0.01
C519
OPEN
R540
10K
R541
10K
R542
3.3K
C534
CF0.056
VR502
100K
R546
62K
C542
OPEN
L503
AMIFT
C522
CK0.01
C524
0.47/50
C571
1/50
R538
6.8K
C525
10/50
C535
22/16(BP)
*20
R579
0
C538
22/16
C539
750P(J)
C540
750P(J)
R547
100K
C541
2.2/50
R524
100K
C509
12P
C570
10/16
X502
SFU450B3
R539
5.6K
C526
CK0.022
C536
100P(J)
LF501
*17_OPEN
C537
*16_OPEN
R544
100K
R545
100K
R575
120K
R576
120K
VR501
10K
R537
68K
C510
CK0.01
R525
100K
R596
100
R527
8.2K
C513
1/50(BP)
R528
3.9K
R526
100
C512
220/16
C514
CK0.022
*28
R578
0
J505
+5.3V
R569
10K
IC507
ICPN15
IC506
NJM7812FA(S)
J607
OPEN
C511
0.1/50
TR506
2SC2712(Y/GR)
R529
390
TR507
2SK209(Y/GR)
R530
150
IC505
LM7001J
C559
1/50
C560
CK0.01
C561
1/50
C562
1/50
C563
CK0.01
+24.5V
*35
C568
CK0.01
C569
0.01Z
C.GND1
C.GND2
CF504
7.2MHZ
C557
15P
C558
15P
R570
OPEN
FB503
BEADS_INDUCTOR
4P_PIN_JACK
JK502
DAT/TAPE
IN
OUT
R597
*45
C564
*33_OPEN
R571
62K
R598
C565
R572
62K
C587
FB505
BEADS_INDUCTOR
C.GND3
0.01Z
R573
2.7M
C566
OPEN
*44
R592
C589
10/16
R594
200K
R574
2.7M
C567
OPEN
R593
R595
200K
C590
10/16
CW113
11P_TUC-P
TU L
GND(A1-1)
TU R
GND(A1-1)
DAT IN R
GND(A1-1)
DAT IN L
GND(A1-1)
DAT OUT R
GND(A1-1)
DAT OUT L
TO MAIN
(1U-2994)
14P TU
1U-2997-3
H/P_UNIT
TO FRONT AMP
(1U-2995-2)
CY033
H/PL
GND(A1-3)
H/PR
3P-PH
FB601
SHORT
R621
220(1W)
R622
SHORT
C621
1000P(J)
C622
1000P(J)
*34
JK601
R623
220(1W)
R624
SHORT
R628
OPEN
C627
OPEN
C624
CK0.01
C625
CK0.01
C626
OPEN
W604
1U-2997-4
POWER. SW-UNIT
SW631
C631
0.01/400
W606
CY021
2P-VH
TO POWER SUPPLY-1
(1U-2995-1)
TO E.VOL
(1U-3006)
A
B
GND
+15V
-15V
Japan Model
only
CY961
6P-KR
R630
0.1/5W
R631
0.1/5W
R651
SHORT
R640
2.2K
R632
2.2K
TR603
2SA988(E/F)
TR604
2SA988(E/F)
R637
220
D605
1SS270A
C638
0.01Z
C637
10/50
R635
560K
R634
560K
R636
3.6K
TR605
2SC4495
R639
0
C639
0.01Z
R638
2.2K
TR606
2SA988(E/F)
R652
2.7K
CY935
3P-KR
GND(A1-2)
TO MAIN
(1U-2994)
+49.5V
R641
1.2K(1W)
J608
31_SHORT
J609
*31_SHORT
CX035
3P W.T.
C601
CF0.1(250V)
C603
12000/63
D601
S10VB20F9
C605
CF0.1(250V)
C607
CF0.1(250V)
C606
CF0.1(250V)
CX932
3P W.T.
C602
CF0.1(250V)
C604
12000/63
R649
36K
C608
1/50
W605
OPEN
C614
OPEN
C.GND4
CX036
3P W.T.
-49.5V
1U-2997-2
POWER SUPPLY-2
3P W.T.

6 7 8 9 10 11



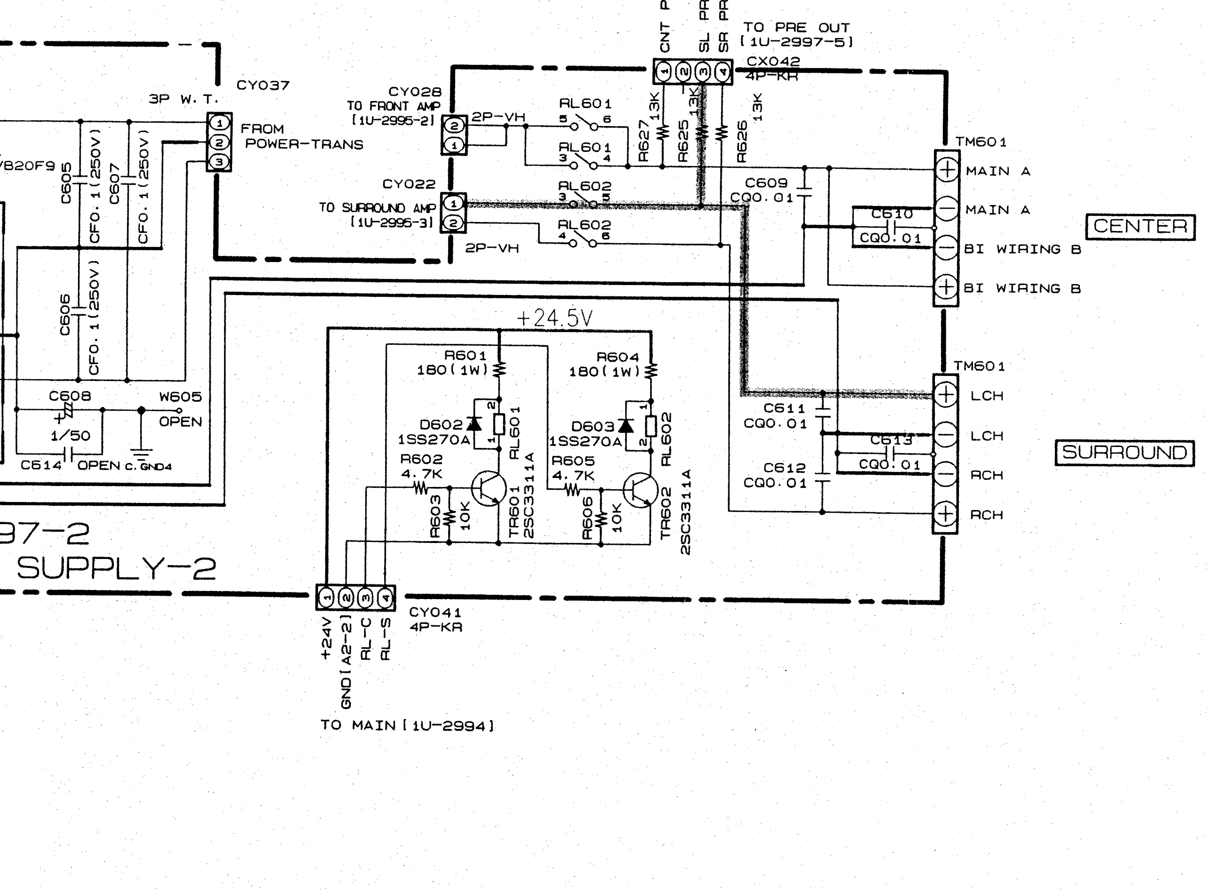
+12V
+15V
-15V
+6V
R550 5.6K
R551 10K
TR508 DTC144EK
C543 OPEN
R553 3.3K
LF503 *18 OPEN
C545 10/16
R580 *24 0
C547 10/16
R559 100
IC504 (1/2) BA15218F
C551 1/50
C553 CK1000P
R565
R563 100 3.9K
C555 22/16
DTC323TK TR509
TR510 DTC323TK
R555 3.3K
R557 100K
C549 OPEN
R561 10K
R567 3.3K
R568 3.3K
R554 3.3K
LF504 *18 OPEN
C546 10/16
R581 *24 0
R556 3.3K
R558 100K
C550 OPEN
C548 10/16
R560 100
IC504(2/2) BA15218F
R566
R564 100 3.9K
C556 22/16
D503 MA151A
TR511 DTA114TK
D504 MA151A
R577 22K
R562 10K
C552 1/50
C554 CK1000P
J506 OPEN
FB501 BEADS_INDUCTOR
D505 MA151A
C572 OPEN
IC503 LA3401
R548 10K
R547 100K
C541 2.2/50
C542 OPEN
C506 812FA(S)
C562 1/50
C563 CK0.01
J507 OPEN
FB503 BEADS_INDUCTOR
1U-2997-1 TUNER UNIT
CW141 14P TUC-P
DATA2 CLK2 STB2 ST/MONO MUTE(T) STEREO RDS TUNED +6V(D1) GND(A2-1) +24V GND(A5-1) -15V 15V
TO MAIN (1U-2994)



1U-2997-5 PRE OUT UNIT
TO POWER SUPPLY-1 (1U-2995-1)
CY038
FL PRE
FR PRE
3P-KR
CY055
SW PRE
MUTE SW
GND(A1)
GND(A1)
GND(A1)
5P-KR
TO MAIN (1U-2994)
CY042
CNT PRE
SL PRE
SR PRE
4P-KR
TO POWER SUPPLY-2 (1U-2997-2)
C944 47/16
R982 680
C956 OPEN
C945 47/16
R983 680
C957 OPEN
C951 1/50
C952 CK0.01Z
FB903
BEADS_INDUCTOR
JK901 4P_PIN_JACK
C946 47/16
R984 680
TR929 2SC2878(A/B)T
C958 OPEN
R988 22K
C959 OPEN
R985 10K
R990 100K
R991 100K
C953 100K
CK100P
R992 220
C947 47/16
TR928 2SC2878(A/B)T
R989 1K
C950 22/16
FB904 OPEN
C948 OPEN
R986 OPEN
C960 OPEN
C949 OPEN
R987 OPEN
C961 OPEN
C954 OPEN
C955 OPEN
OPEN
OPEN
GND2

*	NO	* USA CANADA	TAIWAN R.O.C	ASIA	EUROPE	JAPAN
1	R514	0		100		0
2	R515	100		---		100
3	R516	1K		330		330
4	TR501	---		2SK211(GR)		---
5	R517	---		330		---
6	R502	---		0		---
7	R535	18K	39K	39K		18K
8	R544, 545	100K		100K		100K
9	C539, 540	750p	510p	510p		510p
10	R575, 576	120K		120K		120K
11	C536	100p		---		---
12	R555, 556	3.3k		3.3K		3.3K
13	C527	1/50	0.33/50	0.33/50		0.33/50
14	CF502	SFE 10.7MS2G		SFT 10.7MS2		SFE 10.7MS2G
15	CF501	SFE 10.7MA8		SFT 10.7MS2		SFE 10.7MA8
16	C537	---		22/16		---
17	LF501	---		ANTI BIRDIE FILTER		---
18	LF503, 504	---		LPF 2320085004		LPF 2320085004
19	IC501	F/E 2160102008		F/E 2169013004		F/E 2169012005

*	NO	* USA CANADA TAIWAN R.O.C	ASIA	EUROPE	JAPAN	
20	R579	0	---		0	
21	R536	0	2.7k		0	
22	R520	1K	1K		---	
23	C519	---	CK100p		---	
24	R580, 581	0	---		---	
25	D501	MA151A	MA151A		---	
26	R501	10	10		---	
27	TR503	DTA114EK	DTA114EK		---	
28	R578	0	0		---	
29	R645	---	10K		---	
30	R646	---	5.6K		---	
31	J608, 609	SHORT	SHORT		OPEN	
32	R563, 564	3.9K	15k		3.9K	
33	C564, 565	---	330p	---	---	
34	JK601	Ni	Au	Ni	Ni	
35	C568	CK0.01	---	CK1000p	---	
36	C591	CK1000p	---		---	
37	C518	---	---		CK0.01Z	
38	R591	---	---		0	
39	C544	0.01Z	0.01Z		---	**
40	C592	---	CK1000p		---	*
41	C593	---	---		100p	**
42	C594	---	---		100p	
43	C520	100p	100p		---	
44	R592, 593	0	0	100	0	
45	R597, 598	0	0	470	0	



CNT PRE
SL PRE
SR PRE
TO PRE OUT (1U-2997-5)
CX042 4P-KR
3P W.T.
CY037
FROM POWER-TRANS
CY028 TO FRONT AMP (1U-2995-2)
2P-VH
RL601
R627 13K
R625 13K
R626 13K
CY022 TO SURROUND AMP (1U-2995-3)
RL602
2P-VH
C605 CF0.1(250V)
C607 CF0.1(250V)
C606 CF0.1(250V)
C609 CQ0.01
C610 CQ0.01
TM601
MAIN A
MAIN A
BI WIRING B
BI WIRING B
CENTER
+24.5V
R601 180(1W)
R604 180(1W)
D602 1SS270A
D603 1SS270A
R602 4.7K
R605 4.7K
R603 10K
R606 10K
TR601 2SC3311A
TR602 2SC3311A
C608 1/50
W605 OPEN
C614 OPEN C.GND4
C611 CQ0.01
C613 CQ0.01
C612 CQ0.01
TM601
LCH
LCH
RCH
RCH
SURROUND
97-2
SUPPLY-2
CY041 4P-KR
+24V GND(A2-2) RL-C RL-S
TO MAIN (1U-2994)

+B LINE
-B LINE
▨ SIGNAL LINE

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

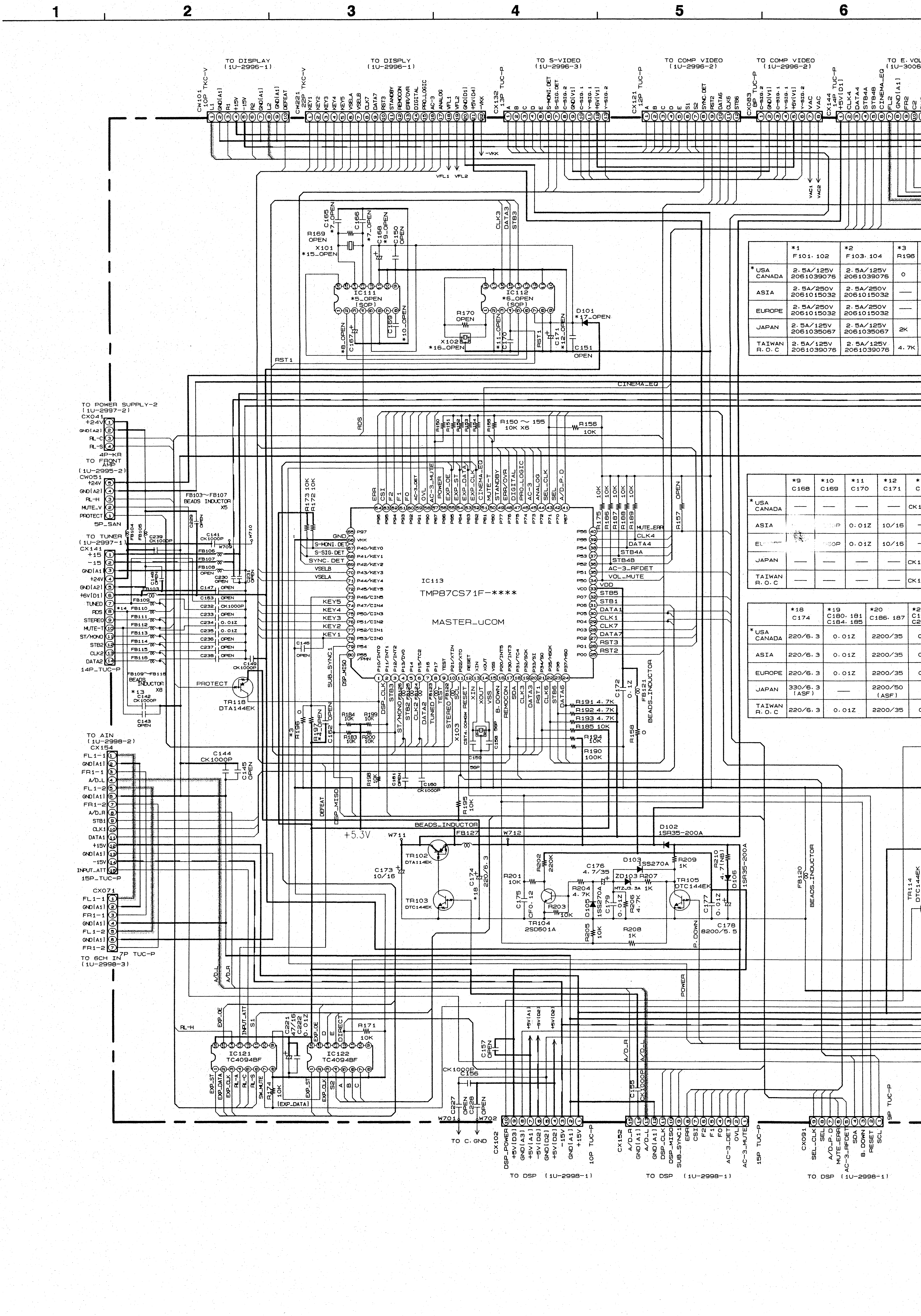
CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer unit the problem is located and corrected.

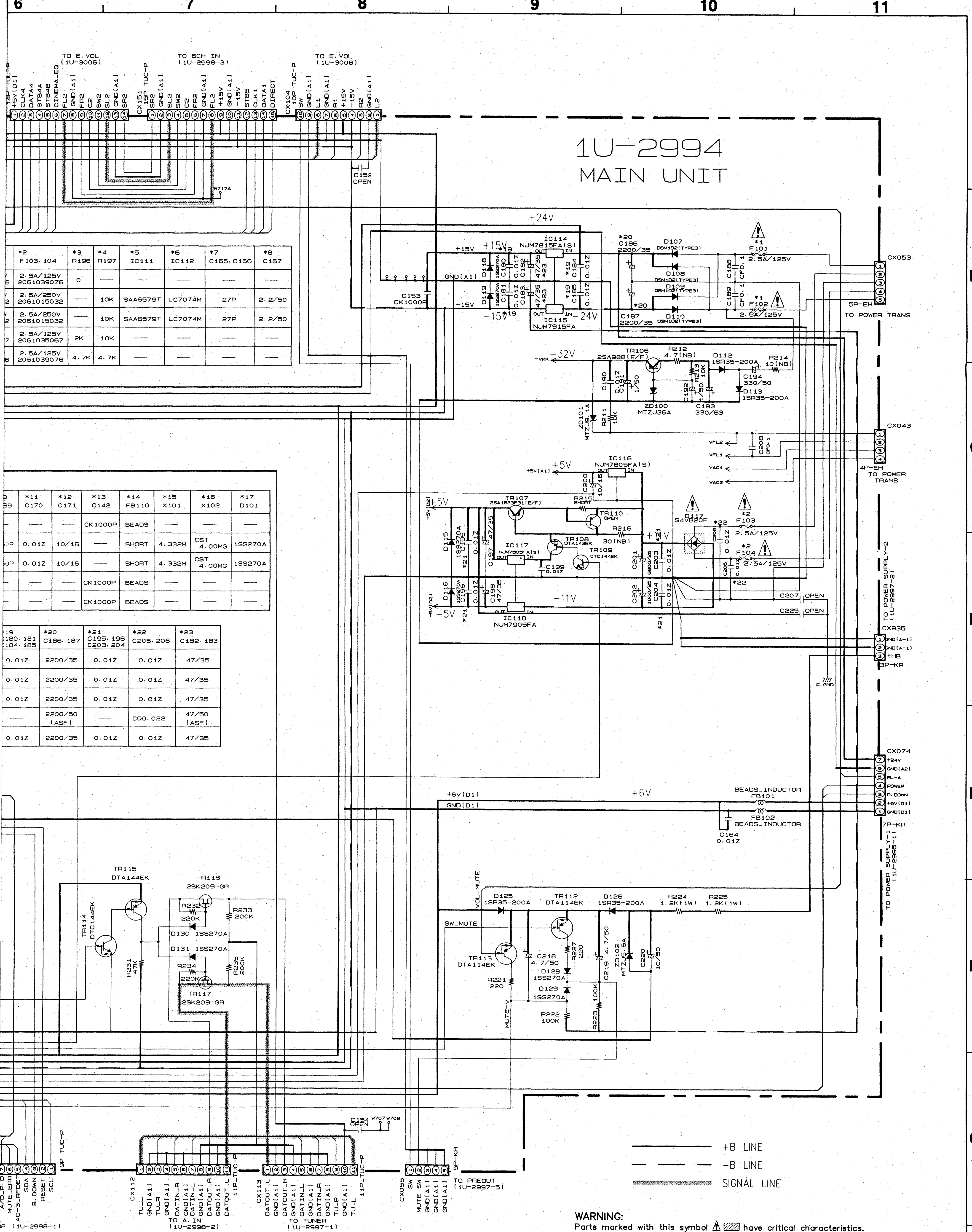
SCHEMATIC DIAGRAM (5/5)


1
2
3
4
5
6
TO DISPLAY (1U-2996-1)
CW101 10P TKC-V
TO DISPLY (1U-2996-1)
CW221 22P TKC-V
TO S-VIDEO (1U-2996-3)
CX132 13P TUC-P
TO COMP VIDEO (1U-2996-2)
CX121 12P TUC-P
TO COMP VIDEO (1U-2996-2)
CX083 8P TUC-P
CX144 14P TUC-P
TO POWER SUPPLY-2 (1U-2997-2)
CX041
4P-KR
TO FRONT AMP (1U-2995-2)
CW051
5P_SAN
TO TUNER (1U-2997-1)
CX141
14P_TUC-P
TO AIN (1U-2998-2)
CX154
15P_TUC-P
CX071
7P TUC-P
TO 6CH IN (1U-2998-3)
IC111 *5_OPEN (SOP)
IC112 *6_OPEN (SOP)
IC113
TMP87CS71F-****
MASTER_uCOM
IC121 TC4094BF
IC122 TC4094BF
TR118 DTA144EK
TR102 DTA114EK
TR103 DTC144EK
TR104 2SD601A
TR105 DTC144EK
D101 *17_OPEN
D102 1SR35-200A
D103 1SS270A
ZD103 MTZJ3.3A
D106 1SR35-200A
FB121 BEADS_INDUCTOR
FB120 BEADS_INDUCTOR
FB127 BEADS_INDUCTOR
R150 ~ 155 10K X6
R156 10K
CINEMA_EQ
PROTECT
+5.3V
CX102 10P TUC-P
TO DSP (1U-2998-1)
CX152 15P TUC-P
TO DSP (1U-2998-1)
CX091 9P TUC-P
TO DSP (1U-2998-1)
TO C. GND
W701
W702
W711
W712

	*1 F101, 102	*2 F103, 104	*3 R196
* USA CANADA	2.5A/125V 2061039076	2.5A/125V 2061039076	0
ASIA	2.5A/250V 2061015032	2.5A/250V 2061015032	—
EUROPE	2.5A/250V 2061015032	2.5A/250V 2061015032	—
JAPAN	2.5A/125V 2061035067	2.5A/125V 2061035067	2K
TAIWAN R.O.C	2.5A/125V 2061039076	2.5A/125V 2061039076	4.7K

	*9 C168	*10 C169	*11 C170	*12 C171	* C
* USA CANADA	—	—	—	—	CK1
ASIA	[illegible]	[illegible]	0.01Z	10/16	—
EUROPE	[illegible]	[illegible]	0.01Z	10/16	—
JAPAN	—	—	—	—	CK1
TAIWAN R.O.C	—	—	—	—	CK1

	*18 C174	*19 C180, 181 C184, 185	*20 C186, 187	*2 C1 C2
* USA CANADA	220/6.3	0.01Z	2200/35	C
ASIA	220/6.3	0.01Z	2200/35	C
EUROPE	220/6.3	0.01Z	2200/35	C
JAPAN	330/6.3 (ASF)	—	2200/50 (ASF)	
TAIWAN R.O.C	220/6.3	0.01Z	2200/35	C


1U-2994
MAIN UNIT
6
7
8
9
10
11
A
B
C
D
E
F
G
H
TO E. VOL (1U-3006)
TO 6CH IN (1U-2998-3)
TO E. VOL (1U-3006)
CX151 15P TUC-P
CX104 10P TUC-P
C152 OPEN
W717A
+24V
IC114 NJM7815FA(S)
IC115 NJM7915FA
+15V
-15V
-24V
GND(A1)
C153 CK1000P
D118
D119
D107 DSM1D2(TYPE3)
D108 DSM1D2(TYPE3)
D109 DSM1D2(TYPE3)
D110 DSM1D2(TYPE3)
C186 2200/35
C187 2200/35
C188 CF0.1
C189 CF0.1
F101 2.5A/125V
F102 2.5A/125V
CX053
5P-EH
TO POWER TRANS
TR106 2SA988(E/F)
R212 4.7(NB)
D112 1SR35-200A
R214 10(NB)
C194 330/50
D113 1SR35-200A
ZD100 MTZJ36A
C193 330/63
C190
C191 1/50
C192 1/50
R213 10K
ZD101 MTZJ9.1A
R211 10K
-32V
-VKK
VFL2
VFL1
VAC1
VAC2
C208 CF0.1
CX043
4P-EH
TO POWER TRANS
IC116 NJM7805FA(S)
+5V(A1)
+5V
C200 10/16
TR107 2SA1633F31(E/F)
R215 SHORT
TR110 OPEN
R216 30(NB)
TR108 DTA143EK
TR109 DTC144EK
IC117 NJM7805FA(S)
C199 0.01Z
D115 1SS270A
D116 1SS270A
C195
C196
C197 47/35
C198 47/35
IC118 NJM7905FA
-5V
-11V
+11V
C201
C202
C203 0.01Z
C204 0.01Z
D117 S4VB20F
F103 2.5A/125V
F104 2.5A/125V
C205
C206
C207 OPEN
C225 OPEN
CX935
GND(A-1)
GND(A-1)
+HB
3P-KR
C.GND
TO POWER SUPPLY-2 (1U-2997-2)
CX074
+24V
GND(A2)
RL-A
POWER
P.DOWN
+6V(D1)
GND(D1)
7P-KR
TO POWER SUPPLY-1 (1U-2995-1)
+6V(D1)
GND(D1)
+6V
BEADS_INDUCTOR FB101
FB102 BEADS_INDUCTOR
C164 0.01Z
TR115 DTA144EK
TR114 DTC144EK
R231 47K
TR116 2SK209-GR
R232 220K
R233 200K
D130 1SS270A
D131 1SS270A
R234 220K
R235 200K
TR117 2SK209-GR
VOL_MUTE
SW_MUTE
D125 1SR35-200A
TR112 DTA114EK
D126 1SR35-200A
R224 1.2K(1W)
R225 1.2K(1W)
TR113 DTA114EK
C218 4.7/50
R227 220
D128 1SS270A
D129 1SS270A
C219 4.7/50
ZD102 MTZJ5.6A
C220 10/50
R221 220
R222 100K
R223 100K
MUTE-V
C154 OPEN
W707
W708
9P TUC-P
A/D_P_D
MUTE_ERR
AC-3_RFDET
SDA
B. DOWN
RESET
SCL
(1U-2998-1)
CX112
TU_L
GND(A1)
TU_R
GND(A1)
DATIN_R
GND(A1)
DATIN_L
GND(A1)
DATOUT_R
GND(A1)
DATOUT_L
11P_TUC-P
TO A. IN (1U-2998-2)
CX113
DATOUT_L
DATOUT_R
GND(A1)
DATIN_L
GND(A1)
DATIN_R
GND(A1)
TU_R
GND(A1)
TU_L
11P_TUC-P
TO TUNER (1U-2997-1)
CX055
MUTE SW
GND(A1)
5P-KR
TO PREOUT (1U-2997-5)
+B LINE
-B LINE
SIGNAL LINE

*2 F103. 104	*3 R196	*4 R197	*5 IC111	*6 IC112	*7 C165. C166	*8 C167
2. 5A/125V 2061039076	0	—	—	—	—	—
2. 5A/250V 2061015032	—	10K	SAA6579T	LC7074M	27P	2. 2/50
2. 5A/250V 2061015032	—	10K	SAA6579T	LC7074M	27P	2. 2/50
2. 5A/125V 2061035067	2K	10K	—	—	—	—
2. 5A/125V 2061039076	4. 7K	4. 7K	—	—	—	—

*11 C170	*12 C171	*13 C142	*14 FB110	*15 X101	*16 X102	*17 D101
—	—	CK1000P	BEADS	—	—	—
0. 01Z	10/16	—	SHORT	4. 332M	CST 4. 00MG	1SS270A
0. 01Z	10/16	—	SHORT	4. 332M	CST 4. 00MG	1SS270A
—	—	CK1000P	BEADS	—	—	—
—	—	CK1000P	BEADS	—	—	—

*20 C186. 187	*21 C195. 196 C203. 204	*22 C205. 206	*23 C182. 183
2200/35	0. 01Z	0. 01Z	47/35
2200/35	0. 01Z	0. 01Z	47/35
2200/35	0. 01Z	0. 01Z	47/35
2200/50 (ASF)	—	CQ0. 022	47/50 (ASF)
2200/35	0. 01Z	0. 01Z	47/35

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